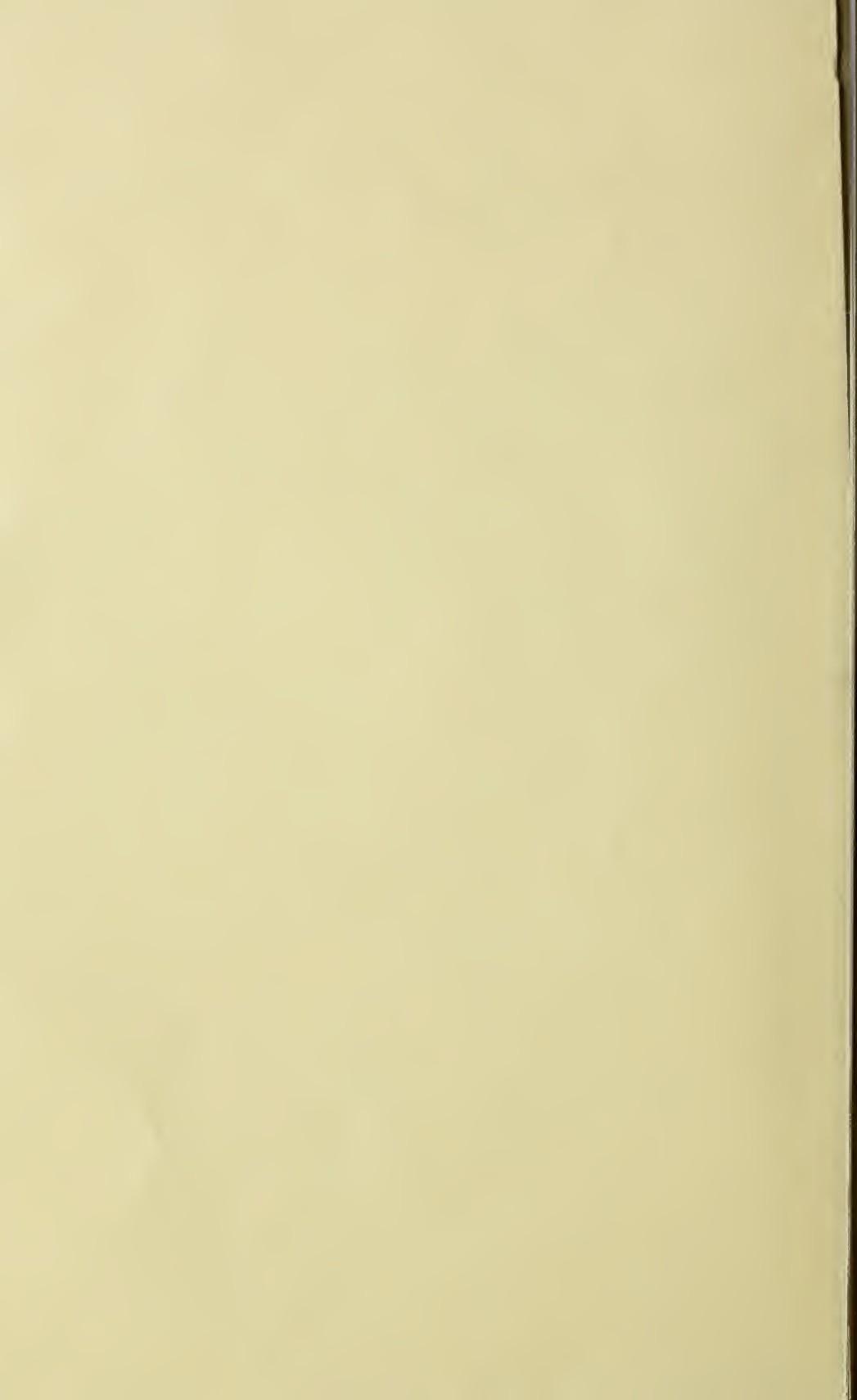


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THE
MARYLAND FARMER :
DEVOTED TO
Agriculture, Horticulture, and Rural Economy.

VOL. 8.

BALTIMORE, JUNE, 1871.

No. 6.

CULTIVATION OF THE RASPBERRY.

Of all the berries brought to market the raspberry is confessedly the most delicious. It also, by reason of its scarcity, brings the highest price. Why this is so it is difficult to understand. No small fruit properly cultivated would pay the producer better; very few would pay as well. That skill and care are required to cultivate it to advantage is most true. But what crop is there which is made a marketable commodity, that does not require skill and care. Of strawberries, in ordinary seasons there is an abundance, and as soon as the main crop comes in the price rules low. But the raspberry seems most unaccountably to have been neglected, and whilst the wild black raspberry bears profusely, and is brought to market in large quantities, the supply of the cultivated sorts, the very kind, in fact, that are most delicious, and therefore most in request, both as table fruits and for preserving purposes—in which latter respect the raspberry is infinitely superior to the strawberry—has always been far less than the demand. Coming, also, as the raspberry does, almost immediately after the strawberry season is over, it fills, or ought to fill a gap between the earlier and the later small fruits. This it might readily be made to do, if it were more extensively cultivated.

We know very well that the better sorts of raspberries, such as the Red Antwerp for instance, are of delicate habits and shy bearers, under careless cultivation; but the protection they need in our winters may be easily given them, whilst with a decent amount of care and attention they will not only produce good crops, but such as will amply repay the labor bestowed in raising them.

In England, and on some parts of the continent of Europe, the raspberry plantations are worth a visit to see. They cover many acres of ground, bear heavily every season, and surpass in perfection of berry any that are met with in our markets.

Now, we cannot understand why it is that we should fall so far short in this fruit, in the cultivation of which other nations so greatly excel. It cannot be altogether in the difference of climate, for in Holland, where the raspberries are very fine, the winters are as severe as they are with us. It cannot be in the nature of the soil, for we have soils that will compare with the best abroad. The only conclusion then that we can reach is that the raspberry is, as far as its finer varieties are concerned, one of our neglected fruits. If this be so, and the raspberry can be as well cultivated with us as it is abroad, and to far greater profit, it is evident that there is in the raising of this fruit a fine field open to enterprising men. This field not only includes the foreign varieties of the berry, but also the native sorts—which are known to be hardy, and which might be greatly improved by hybridization. But assuming that we begin to cultivate more extensively the sorts we already have, the opportunity is still a good one. After this introduction it is proper we should say something about the soil, and the best method of cultivation, before leaving the subject to the consideration of our readers.

The raspberry thrives best in a deep rich loam. It should be moist, and comparatively cool, and should incline to clay rather than to sand. It will bear heavy manuring, but if of barn yard manure it should be old and well rotted. Chips, and other manure of vegetable origin, containing but a small proportion of ammonia, is probably the best, and should be so abundantly supplied as to act as a mulch to the roots of the canes, thereby affording not only nourishment to the roots, but assisting to keep the soil above them cool. In setting out a plantation the ground should first of all be deeply ploughed and thoroughly pulverized, and the young canes should then be planted in rows not less than four feet apart each way. The best way of fixing the distances is to checker off as if for corn. In

planting make the holes of a size capable of taking in the roots without bending them; after planting, mulch, and in dry seasons water freely. During the whole of the first season keep the soil loose in the intervals, and hoe around the young canes lightly, taking care not to disturb the roots. In October cut down the canes to four feet, and if the varieties are foreign, and only half hardy, lay down the canes, peg them to keep them in place, and cover them lightly with soil. In the spring, and through the summer of the second season, pursue the same course, and in the autumn top the canes as before, and lay them down for the winter. Where the hardier native varieties are used, these precautions are unnecessary. The third year the canes—having in the meantime thrown up so many others as to make a good sized bush—should be treated in a similar manner, and if the system of cultivation has been kept up as suggested, a considerable quantity of berries may be picked and marketed this year. The subsequent treatment is precisely the same, taking care to keep the whole plantation well tilled, and free from weeds—watering liberally in dry weather—mulching the canes whenever the old mulch decays, and cutting out annually all dead wood, and all weak canes—topping off at a height of four feet, and tying the canes to good stout stakes, firmly driven into the ground. The kinds more strongly recommended for the Middle States are the Philadelphia and the Doolittle Black. The Philadelphia, of a dark red color, is hardy, of large size and productive. The Doolittle Black Cap, an improved variety of our American Black Cap, is also hardy. These two are the principal varieties that may be fairly said to stand the winter of the Middle States unprotected—with proper care, however, in laying down the canes in the autumn, quite a number of fine varieties can be grown, the best of all, by reason of its delicious flavor, being the Red Antwerp. Next to this come "Brinkle's Orange," the "Franconia," the "Hornet," and the "Falstaff." Other varieties beside these are offered for sale, which may be suspended in some respects, but their merits have not thus far been so well tested.

MIXED FARMING.—The *Farmers' Herald* (Chester, England) forcibly says: "Mixed husbandry is needful to realize the full amount of profit which the farm properly managed will yield. Every year the price of farm products varies—some will be high and some low, and thus the farmer catches good prices for a part, if not all; whereas, if he is wholly dependent upon one kind of crop, he may be wholly disappointed. A little sold of everything makes a muckle, and if one thing does not pay, another will."

Be just before you are generous.

SOME WORDS OF ADVICE TO FARMERS AND THEIR HOUSEHOLDS.

A constant residence in the country and work in the fresh pure air ought to be conducive to long life—almost all the conditions that should make the doctors visits "few and far between" are answered by it. The lungs are well expanded; the muscles all brought into regular use, and the food abundant. Why then are not the generality of our farmers older men at their decease? It is a recognized fact that their average length is shorter than that of men working at other and seeming less healthful vocations. Some of the causes which lead to this distinction between farm and city life, we should not have space enough to explain in the compass of this article. A few words of advice and warning is all we can give. In the first place the muscles of the body in the busier seasons of farm work—a season which in many cases does not come to an end until the depth of winter—instead of being judiciously exercised, are unavoidably subjected to severe and long continued overstrain. In rain or shine the operations of the farm must go on. There is always something to be done. Often the work gets behind-hand, and has to be made up by extra exertions. When night comes the frame is utterly weary and worn out. Supper is no sooner ended than sleep, heavy and deep, presses upon the eyelids. Stiff, aching and unrested, the man arises in the morning to go through the same exhausting routine. All this work tells slowly but surely on the physical force. The farmer at fifty not unfrequently looks vastly older than the city man of the same age.

Is not this to a considerable extent the farmer's own fault. It is true that in his occupation, of all others, there is no end to the work to be done. Let him press and urge it as much as he will there is still more to be attended to than his utmost exertions can compass. The primary reason why this is the case, is that he almost invariably attempts to make up in extent of area for the lack of fertility in the soil itself, and so does not adapt the amount of work to be done to the force required to do it easily and properly. We are, of course, speaking of farmers of moderate means, and who engage personally with the male members of the family in doing a large portion of the work of the farm.

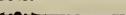
Not only does this daily round of hard labor tax the energies of the farmer and his sons, but the wife and the daughters also suffer incidentally from it. It is no easy matter in the absence of that help which is so much needed and so frequently not to be had, for the wife to board the hands, to cook and wash, attend to the cows and often to the garden in addition, with only such assistance as the younger members of the family can give her. Such onerous

duties are well calculated to break down prematurely the stoutest and the strongest.

But apart from the injury done to the health by overwork it may and frequently does suffer from other causes, many of which are preventible. In some districts, and often those where the soil is most fertile, malarious diseases prevail. In other districts the drinking water is scarce, or impure. The water of living springs, when kept free from noxious matters, is invariably conductive to health. But where wells and cisterns are used, the greatest caution requires to be exercised to prevent the water from becoming contaminated either through defective drainage or the presence of deleterious sediment. Besides this, there is danger from the decay of vegetable matter in proximity to the household, and in the heaps of refuse which but too often are left neglected until diseases of a typhoid type and the counsel of the physician necessitate their removal.

Dense shade near the dwelling has also an injurious effect on the health of the family. It promotes dampness, and although it may not often be the primary cause of disease, yet if the seeds of certain maladies are in the system, the exclusion of air and sunshine will sensibly retard the recovery of the patient—more especially is this the case where there is a hereditary tendency to consumption.

Give a dwelling, therefore, free access to sunshine and fresh air. Avoid a low location, and a damp, compact subsoil, which will not admit of efficient drainage. Remove from the cellars and the vicinity of the house, all vegetable matters that by their decay promote disease. Be careful that the water used for household purposes is pure, and in the operations of the farm, seek by high farming to produce heavy crops from a few acres, and thus bring the labor required to cultivate them within the easy compass of the force to be employed, rather than wear out the strength and destroy the health by attempting to compensate by overwork for the want of fertility in the soil.



LAYERING SHRUBS.—It is often to us a subject of surprise to find so few persons, especially those residing in the country a distance from nurseries, who attempt to increase their stock of shrubbery by layering the branches. Almost every variety of shrub can be thus multiplied. Even among those who do this it is not often that the queen of flowers, the Rose, is thus treated. It is usually propagated by sticking cuttings from the new wood in August and nursing carefully through the winter. By laying the growing branches, however, it is by the succeeding season a bloomer; and this too can be done so easily, that is without the use of a sash or hot-bed usually resorted to with the cutting. In laying down, take a sharp knife and slit the part of the branch that enters the ground, from one joint to another, then cover with two inches of soil, and fasten down with a forked stick. But not only roses, almost every kind of shrub can be thus propagated. And the person who does not know how to do this, should go without them all the days of his life.—*Germantown Telegraph*.

CISTERNS.

You suggested a very good plan when you advised farmers and others who have not running-water convenient, to make rain-water cisterns. I will carry it a little farther, and remind them that in many cases they may save themselves the trouble of pumping water from their cisterns when made, by placing them so that the water will run from them by its own gravity. The great majority of barns are built on more or less descending ground with the cattle-yards on the lower side. By placing cisterns on the side of the barn where the ground is most elevated, you can very frequently run the water from the bottom to a trough in the cattle-yard, where you can regulate the flow by a water-cock. Even when you have but slight fall you can bank up a cistern and thus get sufficient fall for the purpose.

To form some idea of the supply of water of which persons may avail themselves, I will quote from Ag. Rep. for 1867. "The average fall of water in a year on the roof of a barn 30x40 is over 400 hogsheads; enough to furnish drink for a large stock the year round, though they get none from any other source. A hogshead holds about 64 gallons, and 400 hogsheads about 25,600. This will allow 4 pailfuls each, daily, for 20 head of stock, the year around. A cistern holding 100 hogsheads would be amply sufficient for that number of stock. A hogshead is about $8\frac{1}{2}$ cubic feet; a hole 2 feet 2 inches square and the same depth will hold one hogshead; one twice that size and depth will hold 8 hogsheads; one 8 feet each way will hold 62 hogsheads; one 10 feet each way will hold 120 hogshead." From the foregoing those interested can form their own estimate of the size they need. I have arranged to make a cistern this summer to water my stock, and not having sufficient fall, I intend to bank it up four feet above ground to get the ten feet of depth which I wish to make it. I have a well of excellent water at the lower side of a cattle yard, but we have all grown tired of pumping the water from it, and think the expense of a cistern will soon be repaid in the saving of labor. With a good-sized trough any one by simply turning a cock, can water the stock. I will build up and arch over with stone, all except a man-hole at the top; then cement it over with good water-lime cement. One of my neighbors has a cistern from which he takes the water through the barn, having spigots at needed points to wet feed and water stock in stormy weather. Other cisterns I have seen built entirely above ground, banked over with earth and then sodded, which made quite an ornamental appearance when clothed with bright green herbage.—WILLIAM T. SMEDLEY, in *German-town Telegraph*.

Our Agricultural Calendar.

FARM WORK FOR JUNE.

We have very few suggestions to make in regard to the work of the month in additional to our usual account of customary operations. In point of fact the work of preparation and cultivation so far as the smaller cereals and the grasses are concerned, is well over, and the business of harvesting is approaching. The very nearness to harvest time, however, makes June a busy month, for all sorts of farm operations must be pushed forward, so as to give the opportunity of using the entire force of field hands in gathering the harvest and stacking and storing the grain as soon as the occasion arrives.—

Thus far the season has been more propitious, and from all quarters we have the most flattering accounts of the condition of the wheat crop. Oats, also, in consequence of the frequent rains and occasional spells of cool weather, are reported as doing well; whilst the corn, though backened somewhat by the causes which have been advantageous to the oats, was generally planted earlier than usual, owing to the favorable weather of early spring.

The work for the month is as follows:

Harvesting.

In southern Maryland harvesting usually commences as early as the last week in June, but as a general rule in this latitude, the true harvest season may be said to commence sometime during the first week in July. In one respect our people are highly favored as compared with those of England and some parts of Continental Europe. The weather at harvest time with us is usually clear and bright, and harvest time is not subject to frequent rains—in England continuous bright weather is the exception. The harvest there taking place in August, rains are frequent and often incessant, and the labor of the year is often jeopardized by the injury done to the crops after they have been gathered, and before they can be secured.

But whether our wheat harvest commences in the latter part of June, or in the early part of September, there are some suggestions concerning it which we think worthy, as usual, of laying before our readers. These are as follows:

The Harvest Force.—Nothing more strongly indicates the intelligent farmer than his capacity to measure the amount of labor required to the work on hand. It should, of course, be ample for all purposes, and it should be so employed as to expedite the work, so that the operations of cutting, raking, binding and shocking up shall be going on simultaneously. A full force with a reserve at hand to be used in case of necessity, is the wisest

plan to act on; but any excess of field hands, beyond what is really needed, is simply a loss of money. The largest force that can possibly be employed, so as to put the harvest through in the shortest possible space of time, is what is most to be recommended. In cutting and gathering the crops slowly, rains may come even in our usually dry climate, and other contingencies may arise which will add largely to the labor and expense if the harvesting goes on slowly, or the force employed is inadequate to the proper prosecution of the work.

Harvest Implements.—These should be of the very best kind. On very many large farms reapers and mowers are now used; but with that class of farmers whose acres are few, and whose means are limited, the cradle and the scythe are still the principal harvest implements. Whether machines or the less expensive implements are employed, it is in the highest degree economical that they should be thoroughly well made, and of the very best quality. The difference in the expenditure of power between a good scythe and a bad one is immense, and where gangs of men are employed, it is absolutely necessary that all their implements should be equally good, inasmuch as the pace in harvesting is regulated by the slowest man.

Time of Cutting Grain.—The best time for cutting wheat is when the grain has acquired the consistence of stiff dough, and can be kneaded between the thumb and forefinger. Grain so cut is plump and heavy. Left until it is entirely ripe, it shrinks, and there is more loss from shattering of the seed, and from broken heads—moreover, it has been proven by repeated experiments that wheat cut before it is fully ripe, will yield 15 per cent. more flour than the same grain will produce when dead ripe.

Cultivation of Corn.

Unless the corn has been so well advanced by the time of harvest that it is in a condition to lay by, the work of cultivation ought to go on all through the period of harvest.

Beets, Mangold Wurtzel, and Carrots,

Although very late in the season to plant these useful roots, a fair crop may still be grown, if the soil be made very rich and the cultivation thorough. Root crops, and the green soiling of cattle constitute the basis of good husbandry—although in cases where there is a superabundance of land, and where the market for hay is remote, the system of root culture and green soiling is not likely to be followed. The time will soon come, with the increase of population and the breaking up of large estates into small but highly cultivated farms, when these economies will have to be consulted.

Late Potatoes.

These should have been planted in May. If planting be not delayed beyond the 10th of June, a

fair crop, in a favorable season, may still be gathered.

Broadcast Corn and Millet.

Wherever green food is required—a dry forage is likely to be deficient, a few acres in broadcast corn and millet will admirably supply the want—the ground should be well manured, deeply plowed and pulverized. Of corn sow not less than three bushels to the acre; and of millet not less than one bushel.

Clover for Hay.

Cut clover when about half the blossoms are turning brown.

Fall Turnips.

Turnips should not be seeded for fall and winter use until the last week in July, or the first week in August. It is, nevertheless, advisable that the land should be well prepared for the reception of turnips beforehand.

Buckwheat.

To obtain a good crop of buckwheat it is necessary to seed early. The ground should be ready and prepared for seeding by the 15th of June, and certainly not later than the first week in July. It thus gets the advantage of the rains which are more frequent before midsummer than subsequently until September is reached, and it will mature before the autumn frosts. Buckwheat will grow on almost any soils, but loams are preferable to clays. If the land requires to be enriched, either of the following mixtures will be sufficient for an acre:

No. 1.—10 two horse loads of barn yard manure; 10 two horse loads of marsh wood or wood's earth; five bushels of bone dust, 10 bushels of wood ashes, 1 bushel of plaster. Ferment, mix, spread broadcast and plough under.

No. 2.—5 two horse loads of marsh wood or wood's earth; 150 lbs. of super-phosphate, 5 two horse loads of manure. Ferment—mix, spread broadcast and plough under.

Quantity of Seed per Acre.—Sow from two to three pecks per acre.

Time of Cutting.—Cut when half the grains are turning black. If deferred later the grain will shatter badly.

Ruta Baga Turnips.

Next to carrots, the ruta baga turnip is the best of all the roots used in stall feeding cattle. The sugar beet may in the whole be as nutritious, but it is coarser and less generally relished by stock. The ruta baga moreover is hardier, keeps better, and under good cultivation yields remarkably well.

Time of Sowing—Sow up any period between the 15th and 25th of June.

Method of Culture.—Either in drills or broadcast, but the drill system is the best.

As to Soil.—Choose if possible a light rich loam, inclining to sand rather than to clay. A well rotted

clover or grass clay, forms a fine preparation for growing large crops of ruta bagas.

Preparation of the Soil.—Plough deep, for the roots strike deep in good soil. Cross plow if the opportunity serves and make the soil through its entire depth, light, loose and friable.

Manures for an acre of Ruta Bagas.—No. 1.—15 two horse loads of well rotted manure; 20 bushels of wood ashes.

No. 2.—250 lbs. of Ammoniated Phosphate, or of bone dust alone—one bushel of plaster and one bushel of salt. Of the above mixtures—one third will be sufficient if the seed is drilled in and the manure applied to the soil. If the seed is broadcast the whole quantity will not be too much.

Quantity of Seed to the Acre.—Broadcast one and a half to two pounds to the acre—in drills one pound to the acre.

After Culture.—The after culture consists in keeping the soil light and loose and clean with the hoe and the cultivator—taking special pains to protect the young plant from the ravages of the fly, by dusting the leaves of dewy mornings with lime or wood ashes or soot.

Leached Ashes as a Manure.

An agricultural journal of Germany calls renewed attention to the great value, as a manure, of soap-boilers' leached ashes, which, as is well known, are prepared by mixing wood-ashes with fresh burnt lime, and boiling or leaching the two together for the purpose of obtaining a caustic lye. Although the soluble salts are removed from these ashes, the insoluble parts remain, namely, the carbonates, sulphates, and phosphates, principally lime salts, accompanied generally by a little caustic lime. Experience has shown that there is no substance equal to leached ashes of this kind for manure, not excepting even the richest guanos; the vegetation of the cereals becoming broader than common by its use, and the stalks more tubular, while the leaves grow of a dark, bluish green. The value of this application is seen more particularly in meadows, where, curiously enough, nearly all the ordinary grass disappears in consequence, and instead of it a thick vegetation of red clover is met with, which will be renewed year by year for a long time, without additional supply.

CAUSE OF SOWS EATING THEIR YOUNG.—It is claimed that costiveness, a very common complaint in sows, causes them to eat their pigs. Green food is the best remedy, and when, in the early spring, that cannot be had, feed potatoes, beets, carrots, or other roots. If medicine is necessary, give a tablespoonful of sulphur several times a week for several weeks before littering.

Garden Work for June.

The work in the Garden for this month is as follows:

Setting out Cabbage Plants.—It is always best, whenever it is possible, to suit the time to the season, to set out cabbage plants in moist, cloudy weather. In a dry season when nothing better can be done, choose the evening of the day for transplanting, and water freely after the work is done. The next thing required is to spade the plants for a few days until they have accommodated themselves to their new situation. In drawing plants from the bed it is better where but few plants are to be set out, to take them up singly with a scoop trowel, and with a portion of the earth attached. In such a case, and with good management, the growth of the plant will not be checked at all. If, however, a large number of plants are to be set out, care should be taken in lifting them to retain as many as possible of the fine roots—as fast as they are drawn they should be put into a bucket or other vessel, containing a mixture of mould, soot and sulphur diluted to the consistence of cream—or, in lieu of this mixture, use fresh cow manure. The roots being kept in either of these mixtures until they are planted, retain their freshness, and start much better than if no such precaution had been taken.

Peas.—Continue to sow peas at intervals of two weeks for succession. Choose, at this season, a shady part of the garden; water the hills thoroughly when planting.

Melons and Canteloupes.—Keep these clean and well watered throughout the month.

Transplanting Cauliflower and Broccoli.—Treat these in setting out in the manner prescribed for transplanting cabbages. The beds where they are to be planted to mature, should be enriched with a heavy dressing of cow or horse manure well rotted. This manure should be dug in about half a spade deep, and should be thoroughly incorporated with the soil; water frequently after sunset of an evening.

Sowing Cauliflower and Broccoli Seed.—Sow seeds of these in warm, open borders, at any time during this month for a full supply.

Beans.—Plant bunch beans at intervals of two weeks for succession. Choose a shady border, and water occasionally.

Lettuce.—Transplant lettuce for heading.

Small Salading.—Every week sow a bed of small salading, to keep up a constant supply.

Radishes.—Thin out the young radishes to three inches apart, and sow fresh seed of the summer kind at intervals of ten days.

Spinach.—Drill in every ten days a few rows of spinach. The ground cannot be made too rich for this healthy and most desirable vegetable.

Carrots and Parsnips.—If the seeding of these roots has been delayed—it may yet be done up to the 10th of the month.

Sowing Cabbage Seed.—Prepare a bed for the reception of the cabbage seed—chiefly Flat Dutch and Savoy—to be transplanted hereafter for winter use.

Cymblings and Cucumbers.—Hoe these well and keep them free of weeds.

Lima and Carolina Beans.—See that these are kept clean, and properly hoed, and draw occasionally a fresh supply of earth about their roots. They will need water in times of drought.

Beets, Parsnips and Carrots.—All these roots now require attention. Keep the earth loose about them—weed them thoroughly and in dry weather do not spare the water.

Early Turnips.—Sow a small bed of turnips for early use.

Salsify, or Vegetable Oysters.—Keep this excellent root free of weeds and the soil loose; water in dry weather.

Onions.—Work these occasionally; keep the soil loose about the bulbs but do not cover them.

Okra—Gumbo.—Thin out the plants, where they stand too closely together, to eight inches apart and earth up.

Tomatoes and Egg Plants.—Transplant these if not done before, during the early part of the month.

Red Peppers.—Set these out from the seed bed—work the plants occasionally and water liberally in dry weather.

Endives.—Set out such plants as may have been already grown in the seed bed—and sow additional seed for a late crop.

Late Roasting Ears.—Plant a few rows of corn for late roasting ears.

Pot and Medicinal Herbs.—Prick out from the seed beds such plants as are large enough to remove during moist or cloudy weather. Spade them after planting for a few days until the young plants have taken root.

Peach Trees.—Examine the roots of the peach trees a few inches below the surface of the ground. If gum exudes the grub is certainly at work under the bark. Take a pen-knife and follow its course under the bark, and cut out the grub. Do not desist until it is found and destroyed. Throw wood ashes around the roots and cover all up again.

To REMOVE SCREWS AND NUTS.—When you find they have become fast from rust, pour on a little kerosine or coal-oil, and wait until they become soaked with the liquid.

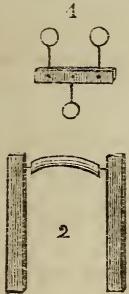
For the Maryland Farmer.

TETHERING CATTLE, HORSES AND SHEEP.

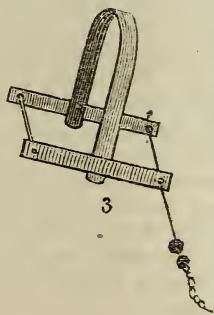
Information on this subject was asked in your January number by a *Pennsylvanian*, and given by *Giardiniere* in your April number. Having been born and raised in a country where tethering is practiced to a greater extent than either Ireland or Scotland, allow me to make a few remarks on the subject. *Next to soiling*, tethering is the most economical and reliable mode to feed cattle through the summer. Twenty-five years back tethering was done with rope, but now light iron chains, similar to such as are used for horse halters are preferred. To fasten the chain to the ground an iron pin sixteen inches long, one inch by one and a half inch at the top, tapering down to a point, is used; the upper end containing a ring to which a swivel is fastened. To prevent the pulling up of the pin by strain on the chain by the cattle, it has to be driven sloping into the ground. To the outer end of the chain, and spliced to the swivel, is a piece of three-fourth inch rope, thirteen inches long. The animal is fastened to the tether by a halter made of two pieces of wood ten inches long, two inches wide, and one inch and a quarter thick. At one end of these wooden pieces an inch auger hole is bored for the rope connected with the tether to pass through, and

pieces of wood just below the cheek bones. Now the halter, as you may call it, is ready to be put on the animal, which is done by putting the nose between the two pieces of wood, and slip the one-fourth inch rope over the horns, the iron coming around the nose and the rope connected with the chain under the chin. The tether chain is generally twenty-four feet long, with a swivel on each end. This baiter acts as a punishment whenever the cattle strain the tether unduly, the strain contracting the two pieces of wood on each side of their jaws, and forcing the iron against their nose. When grazing, the halter hangs loose and does not incommodate them at all. The mode of fastening mentioned by *Giardiniere* is more simple, but not so safe. In the above described way I have had as many as one hundred and twenty-five cows tethered at the time in the same field. They were moved seven times a day, each time about four feet; one man and a grown boy having charge. In the forenoon and afternoon they were watered by a water cart being drawn along the rows and each cow watered. When they were to be taken to the stable in hot days, or removed to another distant field, it was done in the following manner: After the pin of the first cow's tether was pulled up the man took hold of the tether one foot from the pin with his left hand, and coiling it to within four feet of the other end. The last coil was laid in the left hand so as to form a flat loop, this was wound round the coil and the end put through the eye left between where the chain has been wound round and the top of the coil. This eye was taken hold of by the man to lead the cow. The next cows tether was done the same way, and the eye similar to the one which was taken hold of by the man to lead his first cow, was put under the one-quarter inch rope on top of the first cow's head, and the eye passed over the first cow's left horn, placing the second cow on the right hand side of the first. In this way ten cows were secured side by side. The eleventh started a new row behind the first cow in the first row, to effect which her tether was left uncoiled about eight feet and passed on the right side of the first cow in the first row, and then fastened over the first cow's horn as mentioned above. Thirty cows were as many as generally taken at once. Horses were tethered in the same way, only a throat-lash being required to keep the halter at its place. Also sheep were tethered, but generally two together and with rope tethers. The lower end of the tether twelve feet long, fastened to the ground by an iron pin with ring and swivel; the other end terminated in a double swivel, to each of which a six foot rope was spliced, the same fastened to the halter like the cow tether. In hot weather the cows were taken to the stable at nine o'clock in the morning, and taken

Double Swivel.



Halter.



Iron Across the Nose.

secured by a knot on the outside, the rope passing first through the left-hand hole. The other end of the two pieces of wood are connected by a piece of iron five inches long and one inch broad, the edges to be turned outward. (If it is wanted for bad stock, apt to strain on the tether, turn the edges inward.) This piece of wood is fastened to the two pieces of wood with small staples three inches and a half from each, and a hole is bored edgeways through the two pieces of wood, making two holes in each piece. The hole to be bored with a one-half inch gimlet. Through these holes a one-fourth inch rope is drawn from one to the other, long enough to go over the head of the cattle, and place the two

out again at four p. m. They were moved in the field at four, six and eight in the morning, and six, eight and ten in the evening. How far to move them at these times depends upon the quality of the pasture. In heavy clover two feet are plenty, in average pasture four feet, and in poor pasture from six to eight.

Apparently, tethering is troublesome, but the animals soon get used to it, and will learn to march like soldiers when coupled together.

L. A. HANSEN.

Okolona, Miss., April, 1871.

ASHES AND THEIR APPLICATION.

Plants derive their substance from two sources—the earth and the air. When they are burned, the inorganic elements that were derived from the air, are returned to it again; while those that were drawn from the soil are left as ashes. But a small portion of the bulk of the plant is derived from the soil, as is shown by the amount of ashes left after burning; yet the presence of each element, however small the amount required, is essential to the complete development of the crop. These mineral substances vary, both in quantity and quality in different plants, and even in different parts of the same plant, and at different seasons of the year. Thus wheat, when burned gives 1.18 per cent. of ash constituents; oats, 2.58; potatoes, 2.65; turnips, 7.05; wheat straw, 3.51; oat straw, 5.74; red clover, 7.48. These mineral constituents are essential to the nourishment of plants, and they are retarded in their growth when they do not obtain a sufficient supply from the soil.

Some of these substances exist abundantly in the composition of most soils, and do not have to be renewed; while others, such as potash, phosphoric acid, lime, magnesia, &c., are found only in small quantities and are soon exhausted by continua cropping. Hence it follows that any material which contains these elements would be valuable as a fertilizer. Wood ashes contain these largely, especially potash, the most of which is in a soluble condition. According to the statement of Prof. Watson, ashes usually yield about one-fifteenth of their weight in potash, but different plants and different parts of the same plant vary greatly in the yield of potash. Stockhardt in his "Field Lectures," states that one thousand pounds of dried manure or crops contain:—wheat, ripe grain and straw, five and one-half pounds potash; barley, do., seven pounds; oats, do., seven; peas, do., eleven; potatoes, (tubers and haulm), twenty-two; clover in flower, twenty.

It will be easy to calculate from the above figures the amount of potash taken from the land by the crop from one acre. It is also easy to see the great value of potash in agriculture, and what crops will

be most benefited by its application. Indeed, some plants, such as potatoes, Indian corn, the grape vine, &c., flourish only where potash is abundant, and are consequently called "potash plants."

The analysis of the ash of hard wood shows that all the mineral substances necessary for the growth of plants can be easily and cheaply furnished, if we can buy unleached, hard wood ashes at twenty-five cents per bushel. The great advantage that wood ashes have over other mineral manure is that they contain, not one or two, but all the mineral constituents of plants. There is no danger of using too much ashes, and the farmer that sells them is selling his corn and wheat for less than one-quarter of their value.

Leached ashes are nearly as valuable for agricultural purposes as the unleached, as by leaching they part with only about four-fifths of their potash, while all the other elements remain, and are condensed about twenty per cent. They should be used, however, as soon after leaching as convenient, as the longer they stand the less valuable they become. A cord of leached ashes are said to contain about 147 pounds of phosphoric acid, 41 pounds oxide of magnesia, 196 of magnesia, 1.657 of carbonic acid, 184 of silex, 21 of oxide of iron, 50 of potash, 2,227 of lime.

Ashes are most valuable for grass lands, the cereal grains and potatoes. When applied to grain they give stiffness to the straw and prevent it from lodging, one hundred pounds of ashes being sufficient for the production of one thousand pounds of good straw. The best way to apply leached ashes is to spread them evenly from the cart after the ground has been levelled, and harrow in. The unleached can be sown broadcast or applied in the hill, but care must be taken not to allow them to fall directly upon the plants. It is an excellent practice to mix them with about an equal quantity of plaster; and if a few bushels of salt are added to the heap, it soon draws moisture and prevents the ashes from blowing.

Ashes should never be applied to the manure heap except just before using, as they liberate valuable elements and allow them to escape. One of the best uses they can be put to, is to mix with swamp muck, as they neutralize the acid contained in the muck, and make a most excellent compost.

—*Ed. Maine Farmer.*

In very hot weather, the cows should be kept as quiet as possible, with plenty of feed and water. The milk should be cooled to the proper temperature and kept so, and watched closely, and, as soon as sour, churn the cream, and as soon as the butter comes, wash it in cold water, but put no ice on the butter, as it will chill and whiten it. Salt pretty strong, keep it in as cool a place as possible, and work it when it is soft.

For the Maryland Farmer.

FARMERS' WELLS.

Good water is an article of the first importance to the health and comfort of every household. The fires that burn within us are constantly producing a thirst that calls daily for "water, water;" but if from any source the water that we drink has become impure, our system cannot long maintain its healthy tone and vigor. If our daily drink has been polluted and poisoned by contact with filth and garbage, is it any wonder that our blood becomes impregnated with the germs of disease?—Hence, the necessity for good and wholesome water to the health of the human family.

All will admit the value of good water, but it is a fact patent to every one that there is much bad water drank—that the water of many wells is often nothing but stagnant water pools in which "green scum" and "wriggle-tails" form the larger half. And who has not seen many a hole called a well filled with a milk-colored fluid ycleped water, and in which half a score of frogs were playing "peep O" behind chunks of rotten wood, or something else still more objectionable. Farmers are too careless about this matter of providing good water for their families. Many a well of good water has been spoiled by having a duck puddle near it. Too often the pigs are allowed to root a hole right by the side of the well, which soon becomes a cess-pool of impurity, tainting the air around, and which at every rain is carried down to be brought back again from the well in every bucket of water. I have seen wells the water of which would actually taste of the contents of an adjacent mud-hole. I have seen wells from which it would be difficult to draw a bucket of water without bringing up a frog.

Is it any wonder that such stuff often generates disease in the human system? Is it any wonder that water impregnated with the essence of mud-holes filled with the filth and excreta of pigs, geese, and ducks should produce a poison virus in the blood to sap the foundation of health. I assert that no doubt many a death, could it be traced to its origin, would find its home in the mud-puddles at the farmer's well. Many a farmer's wife and farmer's daughter have gone down to the grave from no other cause than the lack of wholesome water. And many a doctor owes a handsome fee to these same mud-puddles.

Friend, have you a mud-hole at your well? Go for it at once. Do not eat or sleep till it is removed. Take a hoe and drag out all of the mud and filth, and then fill the hole with dry soil or sand. After doing this, shut out the pigs and poultry from the well and *keep them out*. If the curb is broken or rotten down, replace with a new one. After doing

this, scrape away the grass and surface soil around the well, and replace with a layer of sand and gravel. If from the character of the land your well ever fills with water, cut a ditch six feet deep all around it at the distance of a few yards, and have an outlet from this to take off the water. The water in the well will not, after this, rise higher than the bottom of the ditch. If your water is muddy or impure, throw in a peck of lime to purify it. If animalculæ appear in the water, throw in a half gallon of salt to make them settle to the bottom. And it is worth while to take some pains to fix up some conveniences at your well. A bench to set the bucket on while it is being filled; a handy and easy way to get the water; and a smooth, dry path from the well to the kitchen. These things will make so much easier the task of your wife and daughters. Farmers, do not neglect your wells a single day longer, but see that all about them is neat and tidy, and determine to keep it so.

B. W. J.

Cottage Home, Surry, Va.

OSAGE ORANGE HEDGE.

G. W. Vaughan, of Moultrie County, Illinois, gives the following through the *Germantown Telegraph*:

Our mode of setting and tilling it is as follows: The plants should be taken invariably from the nursery and planted from eight to ten inches apart in the row where a hedge is to be made. The ground should be plowed deep and made mellow by the barrow and roller, then stretch a line, set with a steel spade or pointed steel instrument, or plow a deep furrow where the fence is to be made, and then cover with a hoe. I prefer the two first. Two good hands can set from eighty to one hundred and sixty rods per day, after the ground is prepared. The plants should be tilled well with hoe and plow for the first two or three years. By the third year a *deep ditch* should be made on either side to make the roots strike down to prevent sprouting from plowing near it. No danger of sprouting if a good ditch is made. Mode of cutting: The hedge should be from one to one and a half inches in diameter before cut at all; then cut half off at the ground and bend down along the line of the hedge, commencing at one end. Tops should be trimmed when needed. From each stump and for some distance up the bent stalks, new shoots will start; from these form the height of the fence and keep well trimmed.

To prevent a cow from kicking, buckle a strap tight around her, back of the hips, and in front of the udder, and she cannot kick.

THE GARDENS OF THE CHESAPEAKE.

BY WM. C. LODGE, CLAYMONT, DEL.

Standing upon one of the low sand-hills that skirt the Chesapeake, in the county of Somerset, Maryland, we perceive on our right a number of small islands, stretching, like a string of beads, away up the bay, until lost to sight in the distance. These islands and the eastern shore form a bay extending nearly sixty miles in length, and twenty miles in extreme width, known as Tangier's Sound, famous for its abundance of wild game, and its fine fish and oysters. It has also recently become famous for the variety and excellence of the fruits and vegetables cultivated on the islands.

The waters of the sound are, comparatively, shallow, and are so sheltered as to be rarely much disturbed by the stormy winds that frequently stir up the bay proper into waves almost as boisterous as those of the ocean. Hence the bottoms afford the most favorable breeding-grounds for oysters and clams, while the islands enjoy a temperature free from the extremes of heat and cold common to the same latitude in the interior. The more delicate plants, that generally require a more southern latitude, here flourish luxuriantly.

Neither frosts nor summer heats greatly interfere with horticultural operations, and, in consequence, the season is lengthened so as to bring to perfection the more tardy fruits. The salt atmosphere, too, is destructive to such insects as render fruit growing in other localities a precarious business. The borer, curculio, and apple-moth are, as yet, practically unknown, and while the fruits are not affected in their growth and ripening, the trees grow well, and attain an age much greater than elsewhere in the Middle States. The peach here bears annual crops for forty and fifty years, and the limit to the age of the tree is unknown. Plums, nectarines, apricots, quinces, and figs find a congenial soil and climate, and bear large crops of perfect fruit. Melons and sweet potatoes attain equal perfection, while vegetables which delight in a taste of salt, such as celery, asparagus, and cabbages, grow to great size, and are particularly sweet and tender. For peanuts the soil is admirably suited, and large crops are raised.

In a small peach orchard we noticed a fair crop of fruit, while the intervals between the trees were planted in corn, with melons in the alternate hills. The crop of each appeared about as good as though the ground was exclusively devoted to the particular fruit or grain. The owner estimated the products in money as follows: 400 baskets of peaches, \$250; 40 bushels corn, \$30; 500 melons, \$50;—making an aggregate of \$330 per acre. The manure (sea

moss) had cost him \$8 per acre in six years for carting and spreading, while he had cultivated the ground chiefly with his own hands and a single horse, when not employed with his business of oystering.

We visited a small fig orchard, the third year in bearing, and found on the trees from half a bushel to a bushel of fruit, while much had fallen, and remained ungathered. Fig raising is said to be less profitable than peach growing, where a market can easily be reached, as the figs require care in preparation, and boxes for packing are not readily obtained.

Experiments in dwarfs, especially pears, and in grape vines, were in all cases satisfactory. Standard pears were not much planted, but the fruit of the dwarfs was very large, and perfect in color and flavor, excelling in the latter respects all the California fruit of that kind we have yet seen. The long season, the almost uninterrupted sunshine, and the light character of the soil that reflects the sun-beat, form a combination of causes all tending to give high color and exquisite flavor to the fruit. Few improved grapes are planted. The fox grows well, but does not appear to grow so vigorously as in our low, rich, clay soils. Although we saw a few wild grape vines climbing over the highest trees, we remarked, as a general rule, that the growth of the vine was comparatively slow, while the fruit was plentiful, large, and perfectly colored. The vine comes early into bearing, and the fruit is so matured in all its wine essentials as to make excellent wine without the addition of either sugar or brandy.

The sea-moss, which is thrown on the beach in large quantities in certain seasons, supplies all the fertilizing properties needed by the vegetation of the islands. In a comparison with the best stable manures, it has been found to be equally beneficial for most crops, and more durable. It is gathered by all, without charge, and is often purchased by farmers from the main-land, at about five cents the cart-load, and conveyed up the rivers in scows adapted to the purpose.

With all the natural advantages of climate and soil, and the freedom from injurious insects, together with the abundance of fertilizing material so cheaply obtained, the want of regular communication with the great markets has heretofore been a bar to the extensive cultivation of the more perishable fruits and vegetables. The Baltimore and Washington markets are principally supplied with melons and sweet potatoes, and in part with peaches, plums, and apricots from these islands, and the produce is generally carried in *pungies*—small sail-boats, peculiar to the Chesapeake. The inhabitants, with few exceptions, follow oyster and clam fishing as a business, and only devote their attention to fruits

and vegetables during the four months of the year, beginning with May, when the shell-fish are not in a condition for use.

To illustrate the capacity of the islands, we will mention that on one containing less than three hundred acres exists a population of one hundred and fifty-eight souls. The island is divided into about thirty farms, of one-eighth of an acre to ten acres each, which are worth, at an average valuation, three hundred dollars per acre—a swamp and bit of pine wood inclusive. The most valuable land, however, is that on the shore, covered by water, and suitable for oyster planting. This "real estate" is valued at one thousand dollars and upwards per acre.

All the families on this island appeared to be in comfortable circumstances, and several were considered wealthy, all having obtained their means chiefly from the products of the island and the surrounding waters.

It is no prophecy to say that in a short period these islands will be the gardens from which the markets of Philadelphia and New York will be supplied with the finest vegetables and best fruits. The regular steamers that trade between the southern ports and New York now touch at Cherrystone for freights of oysters, and such vegetables and fruits as the rude cultivation may supply. Intelligent labor only is needed in order to render them the most productive and profitable gardens in America.—*Tilton's Journal of Horticulture.*

MOVEMENT OF WATER IN THE SOIL.

If a wick be put in a lamp containing oil, the oil by capillary action, gradually permeates its whole length, that which is above as well as that below the surface of the liquid. When the lamp is set burning the oil at the flame is consumed, and as each particle disappears, its place is supplied by a new one, until the lamp is empty or the flame extinguished.

Something quite analogous occurs in the soil, by which the plant is fed. The soil is at once lamp and wick, and the water of the soil represents the oil. Let evaporation of water from the surface of the soil or of the plant take the place of the combustion of oil from a wick and the matter stands thus: Let us suppose dew or rain to have saturated the ground with moisture for some depth. On recurrence of a dry atmosphere, with sunshine and wind, the surface of the soil rapidly dries; but as each particle of water escapes (by evaporation) into the atmosphere, its place is supplied (by capillary) from the stores below. The ascending water brings along with it the soluble matters of the soil, and thus the roots of plants are situated in a stream of their ap-

propriate food. The movement proceeds in this so long as the surface is drier than the deeper soil. When by rain or otherwise the surface is saturated, it is like letting a thin stream of oil run upon the apex of the lamp wick—no more evaporation into the air can occur, and consequently there is no longer any ascent of water; on the contrary, water, by its own weight, penetrates the soil, and if the underlying ground be not saturated with moisture, as can happen where the subterranean fountains yield a meagre supply, then capillarity will aid gravity in its downward distribution.

It is certain that a portion of the mineral matters, and perhaps also some organic bodies which feed the plant, are more or less freely dissolved in the water of the soil. So long as evaporation goes on from the surface so long there is a constant upward flow to these matters. Those portions which do not enter vegetation accumulate on or near the surface of the ground; when a rain falls, they are washed down again to a certain depth, and thus are kept constantly changing their place with the water which is the vehicle of their distribution. In regions where rain falls periodically or not at all, this upward flow of the soil-water oftens causes an accumulation of salts on the surface of the ground.

Thus in Bengal many soils which in the wet season produce the most luxuriant crops, during the rainless portion of the year become covered with white crusts of saltpetre. The beds of nitrate of soda that are found in Peru, and the carbonate of soda and other salts which incrust the deserts of Utah, and often fill the air with alkaline dust have accumulated in the same manner. So in our western caves the earth, sheltered from rains, is saturated with salt—Epsom salt, Glauber salts and saltpetre or mixtures of these. Often the rich soil of gardens is slightly incrusted in this manner in our summer weather; but the saline matters are carried into the soil with the next rain.

It is easy to see how, in a good soil, capillarity thus acts in keeping the roots of plants constantly immersed in a stream of water or moisture that is now ascending, now descending, but never at rest, and how the food of the plant is made to circulate around the organs fitted for absorbing it.

The same causes that maintain this perpetual supply of water and food to the plant are also efficacious in constantly preparing new supplies of food. As before explained, the materials of the soil are always undergoing decomposition whereby the silica, lime, phosphoric acid, potash, etc., of the insoluble fragments of rock, become soluble in water and accessible to the plant. Water charged with carbonic acid and oxygen is the chief agent in these chemical changes. The more extensive and rapid the circulation of water in the soil, the more matters will be rendered soluble in a given time, and other things being equal the less will the soil be dependent on manures to keep us up its fertility.—*Johnson's New Work, How Plants Feed.*

For the Maryland Farmer.

UNEQUAL POWERS OF THE ORGANS.

It is curious to notice how unequal are the powers of the organs of the human body. Very few persons have the same command over both organs where they occur in pairs. As a rule none can use both hands alike, and with the same ease and grace. One may be right-handed or left-handed, but few are ambidexters. The hunter finds it very difficult to shut his right eye instead of his left one. This results from the force of habit in "taking sight" when the left eye is closed. The laborer, though carrying burdens for days at a time, seldom changes shoulders. Hand a person smelling salts, and he will almost invariably apply it to the right nostril. Do we catch a distant sound, at once one ear is turned in that direction. Do we look behind us, some will always look round from the right side, some from the left. Do we kick, it is done with the right foot. Do we pick up a stone, it is done with the right hand. In short, there is no person, perhaps, that ever uses both of a pair of organs alike and with the same dexterity. This does not always result from force of habit. I have known children who were born left-handed, and who never could be made any other. I have known some who were taught to use both hands foremost with an ax or a hoe, but they could always labor easier one way than the other. A perfect ambidexter was never known; at least this is my opinion. B. W. J.

Cottage Home, Surry, Va.

ROOT CROPS—MANGEL WURTZEL.

Accidentally coming across a copy of your paper, I noticed an article signed "M.," inquiring with reference to raising roots for stock—"whatever would be the least trouble and most valuable." With your permission, I beg leave to offer a few suggestions to "M.," although not a subscriber to your paper.

We experience the same trouble in Cape May county, New Jersey, that he speaks of, viz: "to keep the amount of stock we need under our present mode of cultivation, without buying a little grain and a small portion of fodder." Our soil is a sandy loam, and by using patent manures and constant ploughing, it has become so exhausted and worn out, that we are obliged to resort to something beside growing corn, or cease farming.

A famous club was instituted here (So. Seaville) about a year and a half ago, and almost the first thing that was noticed was "root crop for stock." Last summer experiments were made by several of our farmers, which, together with former experience, gave this conclusion:—That carrots, parsnips, turnips, rutabagas, beets, &c., are valuable; but

taking all things into consideration, the ease of cultivation, and the amount of crop grown to the acre, "the Yellow Globe mangel wurtzel beet," is decidedly the best.

The seed can be obtained at any of the seed stores, at about seventy-five cents a pound, sent by mail. It requires three pounds to plant an acre, if put in by hand. If a seed drill is used, five pounds will be necessary. I have never yet used a drill that would plant the seed even; so that thinning out and transplanting would be as expensive as hand planting. No doubt there are machines that would do the work more perfectly. They should be one foot apart in the row, by about three feet the other, or give just room to work between the rows with a plow or cultivator. A furrow must be made and partially filled with well rotted barnyard or composted manure, and a furrow thrown on from each way. The ridge should rake down a little, and the seed covered to the depth of two inches. They must be kept free from grass or weeds—stirring the dirt occasionally around them;—and you will get three hundred to five hundred bushels to the acre. In some cases, with a rich soil and extra care, they have gone as high as seven hundred bushels.

If the tops are cut in the field and ploughed under, the land will improve, if planted year after year.

The time for planting is about the middle of May; but very good crops are sometimes raised if planted in June.

So well satisfied are the farmers with its value for feeding stock, that it will be extensively planted this season, to the exclusion of most all other root crops. Its value for milch cows is equal to two bushels of beets for one of corn, for milk and butter. They are also valuable for hogs. For fattening purposes, of course, the corn would be worth much more. The corn can be kept until late in the spring, or if cattle are soiled, until early beets or turnips can be raised.

We think this is the true way to bring up our lands, by raising beets to keep more stock, and of course it will make a corresponding increase of manure.

I had forgotten to say that they should be buried in the ground—just dirt enough over them to prevent freezing—as most cellars are too warm to keep them more than a month or two without wilting so as to injure them.

I am glad farmers are turning their attention to root crops, for there is no doubt of their great value for wintering stock, particularly in point of expense, when compared to feeding corn, as has been our previous custom.—W. D., in *Practical Farmer*.

Dry earth sprinkled plentifully under the roosting perches daily, cannot be too highly recommended. It acts as a deodorizer, preserves and increases the value of the manure made.

SANDY SOILS AND THEIR MANAGEMENT.

The character and treatment of sandy soils are in almost every particular the reverse of those of clay. They do not possess the property of adhesiveness, and they have but little affinity for water, which escapes from them almost as soon as it falls. They have but a slight hold upon the manures which are diffused through them; they are loose in their texture, and may be plowed at any time with equal advantage, provided the sowing or planting is to follow immediately.

As clay soils are much benefited by a mixture of sand, so likewise are sandy soils greatly improved by the addition of clay, in a much higher degree, for though it would never pay, as a general rule, to add sand to clay, yet the addition of a few loads of the stiffest clay to a light sand, would in almost every instance much more than compensate for the trouble and expense. For this purpose, the clay should be thinly spread in autumn upon sward land previously plowed, and the winter's frost will effectually separate the particles. It should then be harrowed thoroughly and deeply in the spring, and subsequently plowed if necessary.

Such a dressing on a light, crawling land is more than equivalent to any equal quantity of the best manure, and will be permanent in its effects. Clay and sand are necessary to each other as they contain qualities which are essential to a good soil; and that will always be found the best which has the proper proportion of each.

Sandy soils are improved by the frequent use of a heavy roller; it cannot be used too often. They require to be made more compact, and any treatment that secures this object will be advantageous.

Lime by its chemical action on the constituents of soils, while it separates clay, renders sand more adhesive; and when cheaply obtained, it is always a profitable dressing for sandy soils, to the full amount that it may require. Gypsum, in considerable quantities, has an effect similar to the lime, both on clay and sand; and when added in smaller portions, produces a striking increase in the crops of sandy soils. Clay marls, containing either carbonate, sulphate or phosphate of lime, are of great value to sandy soils. Equally beneficial are ashes, leached or unleached, peat, or vegetable manures of any kind. Some calcareous sands, containing a large proportion of lime, like those of Egypt and extensive regions in the Barbary States, will produce luxuriantly, if supplied with a slight addition of manure and an abundance of water. Sandy soils can never be profitably cultivated till they have acquired sufficient compactness and fertility to sustain a good growth of grass or clover, and when

once brought to this condition, they are among the most valuable.

They are at all times easily plowed and worked; they require no draining; and though light and dry, are quick and kindly soils, giving an immediate and full return for the labor and manure bestowed upon them. When in condition to produce grass, sheep are admirably adapted to preserve and augment their fertility, and by their incessant migrations over it, their sharp hoofs pack the surface closely producing the same effect as the roller.

Gravelly soils are in some respects similar to sand, but much less desirable, being appropriately termed hungry. They are also like the latter peculiarly leachy, but in an increased degree, permitting the rapid escape of manures, both by evaporation and drainage. Such as are calcareous or composed of lime-stone pebbles, are in a great measure not subject to those objections; as the disposing affinities of the lime (if enough will be found to exist in the soil in a finely comminuted or divided state, which in this condition is enabled to act sufficiently) have a tendency to retain the vegetable matters thus compacting the soil, and holding whatever pabulum, or food of plant, may from time to time be giving to it for the wants of future crops. Unless of this latter description, gravelly soils should not be subjected to tillage; but appropriated to pasture, when sheep will keep them in the best and most profitable condition of which they are capable.

Loamy soils, being intermediate between clay and sand, possess characteristics and require a treatment approximating to one or the other according to the predominance of either quality. They are among the most desirable soils for the various purposes of agriculture.—*American Farm Book.*

How to Banish Fleas.

The oil of pennyroyal will certainly drive these pests off; but a cheaper method, where the herb flourishes, is to throw your dogs and cats into a decoction of it once a week. Mow the herb and scatter it in the beds of the pigs once a month. Where the herb cannot be got, the oil may be procured. In this case, saturate strings with it and tie them around the necks of dogs and cats, pour a little on the back and about the ears of hogs, which you can do while they are feeding without touching them. By repeating these applications every twelve or fifteen days, the fleas will flee from your quadrupeds, to their relief and improvement, and your relief and comfort in the house..

Strings saturated with the oil of pennyroyal and tied around the neck and tail of horses will drive off lice; the strings should be saturated once a day.

Never play at any game of chance.

Grape Culture.

WILL THE USE OF WINE BENEFIT THE AMERICAN PEOPLE?

A PAPER READ BEFORE THE ILLINOIS STATE HORTICULTURAL SOCIETY, IN DECEMBER, 1870, BY C. W. SPALDING, M. D.

To this question, proposed to me by the officers of this society, I answer, YES; but as in this age of inquiry, men are expected to give good and substantial reasons for the faith they hold, I shall, in this brief paper, endeavor to offer some of the principal reasons which lead me to give this affirmative reply.

Let us first notice some of the physical benefits which result from the use of wine. The climate of the United States, and especially of that of the valley of the Mississippi, is noted for the prevalence of bilious diseases. Fevers of various kinds, fever and ague, dysentery, jaundice, etc., etc., are of frequent occurrence throughout its entire extent, from the Gulf of Mexico to the Lake of the Woods. Other diseases, entirely dissimilar to those commonly called bilious, are here more or less modified by becoming intermittent in type. Thus, under the influence of our climate, many diseases become periodic, which do not have that character elsewhere, and nearly all assume more or less of the remittent aspect. Diseases of the class first mentioned are met with in all fertile countries, and prevail in proportion as fertility is accompanied by moisture, or by any climatic conditions which favor the rapid decomposition of vegetable substances. The conditions for development being favorable, and being likely for a long time to remain so, we may regard bilious diseases, in all their wide-spreading influences, as a permanent legacy, bequeathed to us by the soil and climate of the region we inhabit. Or, if any change in this regard is to happen in the future, it will take place so gradually, that many generations must pass away before any essential modification will become established.

It has been a favorite theory with certain writers on Hygiene, that every country contains or produces within its limits the natural remedies for its most prominent diseases. I do not endorse this hypothesis, not knowing whether it is true or false, nor do I propose at this time to even discuss its merits. I merely state it in connection with a pretty well observed claim, which has often been asserted as the result of experience, namely, that the wines produced in any particular country are best suited to the wants and needs of the people thereof.

Americans traveling, or temporarily residing in any of the wine-producing countries of Europe, are

frequently advised by medical men to drink the wines of the country in which they are sojourning, as being the best protection against the diseases incident to its climate, and also as a useful corrective where disease already exists.

The acids contained in our American wines serve as antidotes, not only to the miasmatic poisons which so generally prevail in all this region of country, but they also stimulate the action of the biliary system, which has become torpid under the influence of our debilitating climate. Numerous instances might be cited where whole families have been preserved from bilious diseases throughout the summer and fall, solely by a moderate but daily use of acid wines, while all around them, typhoid and bilious fevers, and chills and fever, were almost universal.

Again, certain individuals who have practised the use of wines, have escaped disease, while other members of the same family who did not use them have been attacked. These and similar results have been observed over and over again, until the conclusions I have stated have been fairly reached. The evidence, therefore, does not rest upon the results in a few isolated cases, but the principle has been verified again and again. Thus the products of our soil yield a beverage pleasant to the taste and wholesome to the stomach, and one that has proved itself a wonderful palliative of, if not an absolute specific against, the various diseases begotten of our summer sun.

Medicines of some kind have been found necessary for the preservation of health with those who live in the unhealthy districts of our Great Valley. If then we are under the necessity of employing a remedy, which, think you, is most to be commended, a bottle of wine or a box of pills?—a glass of Concord or a dose of quinine?—a cup of Catawba or a spoonful of calomel or jalap? The one is inviting, and therefore likely to be taken in time; the other is repulsive, and hence only resorted to when the necessity becomes great. One leaves the head clear and the system free and elastic; the other shatters the nerves, poisons the humors, debilitates the powers, and leaves the man far more liable to disease than he was before. Which then shall we choose, wine or physic? Shall we dose ourselves with mineral and vegetable poisons as a remedy for diseases that are already upon us, or drink the fermented juice of the grape, and enjoy that immunity from our diseases, which is promised to him who uses it aright?

Perhaps of all questions relating to the subject under consideration, that commonly called the temperance question, more than any other, engages the attention of the public mind. All agree that temperance is a sterling virtue; and on the other

hand, no one doubts that intemperance is a great evil. But temperance is an avoidance of extremes. At one end of the series is drunkenness, at the other total abstinence. Certainly temperance can be neither of these, for temperance signifies moderation. The true philanthropist does not restrict the meaning of the term to the excessive use of strong drinks. In its application it includes eating, working, thinking, reading, equally with drinking, and extends to the indulgence of all the appetites and desires. In a word, it is applicable to every pleasure, and to every labor of life.

I am an advocate of temperance in its broadest sense; and I favor its widest, deepest, and its most searching application to every class of society, to every act of life, and even to every motion of the human heart. But because men may and do become gluttons, shall we abstain from food? Because men may kill themselves with over work, shall we cease from labor? Because men poison the very fountains of life, and destroy both soul and body by the excessive indulgence of certain passions, shall celibacy be imposed upon the whole human race? No! let him rather who has not sufficient self-command to assert his manhood, and to subject his appetites to an intelligent control, draw lessons from his daily experience, and learn to compel himself to such wholesome restraints in all the manifold duties and privileges of life as shall preserve him from excess, and lead him to a temperate life; for intemperance dwells only in the abuse, and not in the right and orderly use, of any of the blessings which God has vouchsafed to man.

The temperance movement of our time includes only that branch of intemperance which relates to the use of intoxicating drinks. The most zealous total-abstainer in the land is not more fully aware of the enormity of the evil, nor can he more deeply deplore its existence than I do. I know the suffering which it inflicts on society, and the misery it entails upon mankind. Yet if I were assigned the task of curing the world of drunkenness, I shou'd look to the use of wine as a most important element in the forces I should feel bound to employ. I speak from experience as well as from observation, when I assert that pure acid wines do not cause that insatiable thirst for more, which comes of drinking distilled liquors. A man is as easily and uniformly satisfied with a glass of pure wine as he is with a cup of tea or coffee; provided, always, that he does not inherit a taste for liquors, and that his taste has not been already depraved by the habitual use of distilled spirits. The people of wine-growing countries employ acid wines in place of both tea and coffee at their daily meals, with a decided advantage in physical development in favor of the wine.

Men who have spent their lives in the vineyard and wine-cellars are remarkable rather for their abstemiousness than for the opposite. Can the opponents of the use of wines point to me a single instance where the use of acid wines only has produced an inebriate?

I admit that whisky and brandy-drinkers will become intoxicated on wine when they cannot get distilled spirits; but to prepare the way for such drunkenness, it is necessary that they already possess the love of, and the desire for, distilled liquors.

The point I here make is, that in the main, DISTILLATION is the parent of DRUNKENNESS; and consequently, that those only who have a love for strong drinks are likely to abuse the use of wine. Stop distillation, and in a single generation drunkenness would be almost unknown. But, "how can this be done?" is the question that immediately suggests itself. So long as the demand exists, a supply will surely be furnished. The experience of nations, and the history of the world, show that, right or wrong, men will indulge in the use of stimulating drinks. They have done so from the remotest times of which we have any authentic record, and will probably continue to do so for many generations to come. Any effort, therefore, which looks to an entire abolition of stimulants must, at this day, necessarily result in failure. Restrictive legislation has been tried without benefit. Moral suasion has, with few exceptions, reached that class of men only who need no reform. There remains, therefore, only one other method that has not yet been fairly tried, namely, the substitution of a beverage the use of which shall not be open to the objections which are so justly urged against the use of ardent spirits. Such a substitute we have in the pure acid wines of our own country. As a means of lessening the consumption of distilled liquors, it is my firm belief that their general use would accomplish more than has heretofore been accomplished by all other means combined. If my premises are correct, should we not encourage their manufacture and their wide-spread consumption throughout the land?

When I speak of wines, I mean the fermented juice of the grape. I am no advocate of manufactured compounds, nor am I favorable to the addition of sugar and water for the purpose of increasing the quantity of the product. In unfavorable seasons the "must" may, and sometimes does, require an increase of the saccharine matter contained in the juice, but all such additions should be made with sole reference to improving the quality of the product, and not to an increase of quantity. We may boldly challenge the use of such wines, with confidence that the result will tend to the moral as well as physical benefit of the American people.—*Husman's Grape Culturist.*

From the Southern Farmer and Planter.

ANGORA GOATS.

A subscriber of your journal directed my attention to an enquiry made about Angora goats' fleece in your January number. If you will be so kind as to give a little space in your valuable paper, I will give the true statement, and all about it which may interest your readers. I have been engaged in dealing in Angora goats wool exclusively since my schooling was over, as well as my ancestors for upwards of three centuries, and never saw or heard that Angora goats' wool could not find market to sell. At Angora and its suburbs about 5,000,000 pounds of goats wool is produced every year, and not one pound is left unsold, while in Asia Minor there are neither convenience of railways nor good roads to carry the goods, consequently all things are carried on horse or mule back, still 30,000 to 35,000 bales of Angora goats wool are brought and carried to Constantinople and hence shipped to England every year, how is it possible that Angora goats wool should be unsalable in America? The reason why they cannot sell Angora goats wool in America is that Angora goats, before I arrived here, have been imported and sold as fancy stock, at prices from \$1,000 to \$2,000 each, and those that bought and raised them, seeing their fleece quite undistinguishable from fine silk, they want to sell it at silk prices; therefore they cannot find buyers, except a few fringe manufacturers in New York, who pay now and then, and for a few pounds from \$6 to \$10 per pound. It is true that Angora goats wool at \$1 to \$1.20 per pound is very cheap, but that is the price that it brings in England, because at present the manufacturing of that article is monopolized by a few English manufacturers; consequently American goat raisers must submit, and sell their Angora goats wool at \$1 to \$1.25 per pound until they get that article manufactured in this country.

If they be willing to sell (12 months growth) Angora goats wool at \$1 to \$1.25 every merchant will buy them and ship to England. I, for instance, guarantee to buy the fleece of pure breed Angora goats at \$1 per pound at any time, and when there is peace in Europe, I dare say I can pay \$1.25 for it, and I should like to buy as much as they shear in America for several years to come, but I do not think other merchants would let me have the chance. Until I came to America and began to import Angora goats, I constantly bought thousands of bags of Angora goats wool in Asia Minor and sold in England, and would be most happy to do the same business between America and England.

I am, sir, yours respectfully.

A EUTYCHIDES,

A native of Angora, in Asia Minor, Asiatic Turkey.
Angora Goats Farm, Owings Mills, Baltimore County, Md.

A FEW PRESENT GARDEN HINTS.

Tomatoes can now be set out with tolerable safety. Should there be cool nights, likely to bring frost, the plants should be covered with old paper, boxes or flower-pots. Little is gained by early transplanting. A single night may retard the growth for two weeks, and put them behind those set out a week or ten days later.

Egg plants do generally better by not being set out before the first of June. If the season is very favorable the last week in May can be ventured on. There is no plant so sensitive of cool nights as this. As soon as the weather becomes hot, both the egg and the tomato plants should be well mulched. The latter especially requires a strong soil—it cannot be too rich.

The Yellow radish for summer use can now be planted. This variety seems to do better than any other for the very warm weather.

Now is the time to destroy the steel-colored bugs on the young grape buds. The surest way is to go over the vines every morning for a week or ten days and pinch them to death. They can now be easily seen. One must be expert in catching them, as sometimes they fly, but generally leap away if the branch is shaken. They eat, in their present form, the fruit buds, destroying them sometimes entirely; while their progeny, in the shape of a small dark worm, feed upon the leaves, and if let alone will in some seasons seriously damage the crop. They select the older vines. We have never seen any upon vines under five years old.

Radishes sown around canteloupe hills will frequently protect the young plant from the depredation of the striped bug. The insect prefers the radish leaf to the canteloupe. A sprinkling of whale-oil soap and water will quickly destroy them.

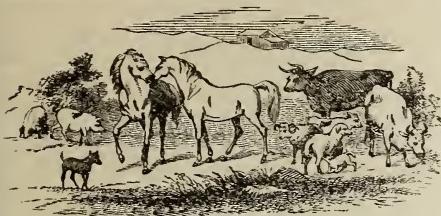
Violets should be transplanted in shady places as soon as the weather sets in.

Evergreen trees, hedges and young fruit trees should be carefully forked around and all grass removed. Trees set out this spring should be well mulched. They of course have been well staked.

Curled lettuce stands summer weather much better than the cabbage lettuce, which is the best for hot-beds and early out-door planting.—*Germantown Telegraph.*

NEW DEODORIZER.—Spongy iron is recommended by Voelcker as a deodorizer of great power, exceeding in its absorbing power even animal charcoal. If water from common sewers be passed through this substance, it will be so completely purified as to keep sweet and colorless for months. Spongy iron is prepared by heating finely pulverized ore with pulverized charcoal in a close furnace. It is thought that water filters made of this substance will possess superior advantages.

Live Stock Register.



For the Maryland Farmer.

COWS BAGS BEFORE CALVING.

Once every other day, for a week or ten days before calving, cows bags and tits should be carefully annointed with hog's lard to render them soft and pliant. It will also prevent the caking and hardening of the milk, and will preserve the skin in a healthy, sound condition. I have known some also to anoint the vaginas a time or two just before the period of delivery. These things seem trifles, but they are of much importance nevertheless. Good attention to stock, especially cows, *will pay*.

B. W. J.

FATTENING CATTLE.

The age at which cattle can be profitably fattened will depend much upon their breeding, and the manner in which they have been reared. Steers or heifers, having from half to three-fourths Short-Horn or Hereford blood in them, and that have been kept in a thrifty growing condition from calf-hood, are usually sufficiently advanced to be put up to fatten, when from thirty to thirty-six months old. Pure bred animals of Short-Horn or Hereford blood may be profitably fattened at an earlier age. A cross of one-half to three quarters Devon blood or common stock, makes an animal that can go into the stalls at two years old, if it has been kept in good growing condition. Common native cattle can rarely be profitably fed for the butcher till they are four years old. If the cattle are put up to fatten before their growth has sufficiently advanced, so as to bring them near their full capacity of laying up substance, much of the food given them, instead of going to make them fat, will be wasted in adding bone and muscle, which could have been obtained more cheaply by giving them time to complete their development on ordinary keep. Besides, the effort to fatten an animal, when in an immature state, can only result in producing meat of a very inferior quality, and commanding a much less price than if the same animal had been kept on longer until its frame had become solid and well knit together, its

muscles developed to their full capacity, and its stomach capable of digesting and assimilating a larger amount of food than is actually required to sustain the ordinary growth and wear and tear of life, without derangement of its vitality.

There are every year greater numbers of young cattle sold to the butcher, or slaughtered by farmers, and their carcasses brought to market at the close of the grass season, when they are in a state of development that renders their flesh of an intermediate quality between veal and beef, without the tenderness of the one and the rich juiciness of the other, but as flavorless and worthless as any flesh can well be. It is sheer folly to sacrifice such animals for the sake of the paltry saving of a few months' food, when by keeping them over one winter more, they would bring nearly their present value, and be fit to make into beef that is full of savory juices.—*Canada Farmer*.

HOW TO KNOW THE AGE OF A HORSE.

The colt is born with twelve grinders; when four front teeth have made their appearance, the colt is twelve days old; and when the next four come forth it is four weeks old. When the corner teeth appear the colt is eight months old; when the latter have attained to the height of the front teeth it is one year old. The two year old colt has the kernel (the dark substance in the middle of the tooth's crown) ground out of all the front teeth. In the third year the middle front teeth are being shifted; and when three years old these are substituted by the horse teeth. The next four teeth are shifted in the fourth year, and the corner teeth in the fifth. At six years the kernel is worn out of the lower middle front teeth, and the bridle teeth have now attained to their full growth. At seven years a hook has been formed in the corner teeth of the upper jaw, the kernel of the teeth next at the middle fronts is worn out, and the bridle teeth begin to wear off. At eight years of age the kernel is worn out of all the lower front teeth and begins to decrease in the middle upper fronts. In the ninth year the kernel has wholly disappeared from the upper middle front teeth, the hook on the corner teeth has increased in size, and the bridle teeth lose their points. In the tenth year, the kernel is worn out of the teeth next to the middle front of the upper jaw; and in the eleventh year the kernel has entirely vanished from the corner teeth of the same jaw. At twelve years old the crown of all the front teeth in the lower jaw has become triangular, and the bridle teeth are much worn down. As the horse advances in age the gums shrink away from the teeth, which, consequently, receive a long narrow appearance, and their kernels have become metamorphosed into a darkish point, grey hairs increase in the forehead, over the eyes, and the chin assumes the form of an angle.—*Journal of the Farm*.

THE
MARYLAND FARMER,
 AT \$1.50 PER ANNUM,
 PUBLISHED THE 1ST OF EACH MONTH,
 BY
 S. SANDS MILLS & CO.
 No. 145 WEST PRATT STREET,
 Opposite Maltby House,
 BALTIMORE.

S. SANDS MILLS, { Publishers.
 E. WHITMAN,

BALTIMORE, JUNE 1, 1871.

TERMS OF SUBSCRIPTION:

\$1.50 per annum, in advance—6 copies for \$7.50—10 copies \$12.00.

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SAVING OF TIMOTHY SEED.—The high price of timothy seed of late has attracted the attention of farmers, and inquiries are being made to the agricultural press as to the best remedy to counteract the extortionate rates demanded by speculators and monopolists. A correspondent of the *Country Gentleman* suggests a plan, which is to let each individual farmer allow enough timothy to ripen on the best part of his field, giving proper attention to plucking out foul weeds and grasses, to prevent the spread of the same, and when fully ripe, cut with a cradle, cure, thresh and bag, for fall and spring sowing. The hay, after the seed is taken off, can be pressed and sold at all times for second quality, and by some it is preferred for high fed horses used as roadsters on the turf.

THE CROP—THE MARKETS.—We have from the several sections of our widely extended country the most favorable reports of the appearance of the wheat and rye crops. In some localities, it is true, we have accounts of the appearance of the fly, &c., but we think it probable that the injury will be found to be very limited in extent. The most uncertainty seems to rest with the crop in California, which is becoming one of the largest as well as nearly the earliest of the wheat growing States. The reports vary very much in regard to it, some saying there will be nearly an average crop of wheat, and others that there will be very little, if any, for export. The supply of wheat in New York, April 15, 1871, was 689,857 bushels; April 17, 1870, there was 1,727,125 bushels, and April 17, 1869, there was 1,562,240 bushels. In Chicago, April 15, 1871, there was 2,226,699 bushels; same time last year there was 2,302,069 bushels. In Milwaukee there was 1,640,000 bushels against 2,493,000 bushels last year. This shows nearly two millions bushels less wheat in these three principal markets than there was at the same time last year.

COTTON.—To counterbalance the fears of an over production of cotton, which of late has been so generally entertained by those most interested in the article, we publish the annexed extract from the circular of Messrs Barber, Simpson & Co., England:

"Great Britain is now consuming about 58,000 bales weekly,—consequently the consumption of Europe, irrespective of Spain and Russia, is at the rate of nearly 93,000 bales per week; but the consumption of these last named countries is rapidly increasing. We are without any exact information regarding Russia, but we know that Spain is consuming about 4,000 bales weekly; the arrivals at Barcelona in the first three months of this year have reached 62,000 bales, and the stock on the 10th instant amounted to 43,000 bales. Thus, Europe requires, at present prices, about 100,000 bales every week; and, even with an American crop of 4½ millions, we shall not have more than sufficient for our wants."

PULVERIZED URITE.—At a recent meeting of the *Maryland Academy of Sciences*, among other interesting subjects presented for discussion, Dr. Foremar read a letter from Allen Payne, in Fanquier county, Va., relating to the successful application of pulverized urite as a fertilizer. Wheat, with this applied, defied the attacks of flies, bugs, &c., and this fact had raised the question as to whether silicate of potash from the felspar is able to protect the plant. Mr. Oudesluys, of Baltimore, referred to the fact that the cultivation of white wheat in the western part of New York had ceased years ago owing to the absence of silicic acid in the soil.

NOTES AND COMMENTARIES.

BY PATUXENT PLANTER.

Dogs.

In corroboration of what I have heretofore stated as to the great loss sustained by these vile enemies to the sheep, I ask the careful and thoughtful reading of the following short editorial, from that able, bravely speaking weekly "*Turf, Field and Farm*," zealous in its advocacy of every thing likely to promote the farming interest, although specially devoted to one of the main branches of agriculture—the rearing and training of race and trotting horses. The impetus given, mainly by the influence of this paper, to breeding blooded stock and trotters, has already added hundreds of thousands of dollars, and will be the means of adding millions to the aggregate wealth of the nation, independent of the inestimable consideration, that in time of war, the government will have at its command the material for the finest cavalry in the world :

"Dogs do not seem to harmonize very well with sheep in Tennessee. During the past year it is claimed that there was an average of 331 sheep killed in every county of the State, making the total loss about nine per cent. of all the flocks. At the modest estimate of three dollars per head, the sheep interest of Tennessee in the past twelve months suffered to the extent of \$84,405 from dogs alone. This does not include the maimed animals, also a source of great loss. In every State this loss to the farmers by the killing and crippling of sheep by dogs is in proportion to the loss that Tennessee has suffered. The worthless curs are not only a source of vexation, but an actual annual expense of millions of dollars to the nation. Certainly it is time to think about legislating them out of existence. The only remedy for the evil is to place a heavy tax upon dogs of mongrel blood."

Not only "legislate out of existence," "the mongrel blood," but tax the full-blood and all the canine race, because the Pointer and Setter, and the New Foundland are as destructive to sheep as the mongrel cur. The New Foundland is my favorite, *id est*, if I like dogs at all, but he seems to have a peculiar, insatiable thirst for sheep's blood. Let legislators only think of the millions saved and the millions gained by such strict laws as would protect this meek defenceless animal, and we should soon rejoice in having more wool, more meat, and the number of horrible deaths from hydrophobia would be greatly lessened. It is the half starved, ill-treated cur or viler "fice dog" that mostly go mad. Our legislation is against common sense and positively opposed to progress. It is supremely ridiculous! On what correct principle is it that

the license for a splendid thorough-bred horse, for which his owner has paid \$10,000 that the horses of his neighborhood should be improved, is \$50, when the owner of a shack, that ought not to be allowed to propagate his dung-hill species, pays only \$10? And again, a farmer who imports a fine sheep at a cost of \$1000 pays a tax in proportion to its cost, while his neighbor keeps a pack of half a dozen sheep destroying pets, pays no tax on them, when they at any moment they choose, can destroy that valuable sheep, without its owner having any redress; because the man who keeps so many worthless dogs, generally, is not worth much more than his dogs would sell for, and that is O. But if he be able to pay any amount of damages, all he has to do to save himself from paying anything at all, is to kill his worthless dog or dogs as soon as complaint is made to him, supported by proof that his dogs had killed this valuable sheep. This law, 1st Code, Art. 87, Sec. 2, page 595, ought to be expunged as a disgrace to our Statute Books. It is a licence to men to gratify their worst passions. A has a spite for some real or imaginary cause against B, and he has a worthless dog, that he cares not a cent for, and B has a flock of 100 fine ewes to be bred to a \$1000 ram at the proper time. All A has to do to glut his vengeance is to let his dog into the ram's pasture, and when it is killed, to say he is sorry, and kill the sneaking sheep-slayer." It is a bid to make men do that crime they would otherwise not do. It operates as an estoppel to all enterprise in the way of improving our breeds of sheep. In the case supposed, B loses not only the cost of the ram, but the increased value of his lambs, which from the 100 choice ewes would certainly be \$1000, making \$2000 beside the cost of another ram; this he loses beyond all hope of recovery, while A gets rid of a pest, and, in his heart, glad to do so. Is this right? Is this justice? If my clod-hoppers mash any body's toes, I can't help it, and don't care; I am only advocating truth and justice!

Plowing.

It is a common error with most farmers to plow indiscriminately light-sandy soils as well as stiff heavy clay land, in the autumn and winter. It is as disadvantageous to plow the former, as it is advantageous to plow the latter. The first wants compacting, the last wants the frost to disintegrate, or comminute the already too closely compacted earth. Instead of loosening by the plow the light lands, it would be better in winter, after a thaw, to run over them a heavy roller, and put on them as much and as heavy stock as possible, so that, by tramping, the minute particles may be pressed together. Stiff soils should be plowed deep, and if they lay level and retain water or too much moisture, they ought to be plowed in narrow lands, or

ridged in narrow beds by back-furrowing, cutting out the last furrows between the beds deep, and opened at the lower end to act as drains. On stiff clays, plowing in the grass, weeds, turf and long manures, aid in loosening the soil by giving air vents, and prevents compacting after the freezing and thawing have separated the particles by the action of frost, nature's wonderful pulverizing harrow ! These coarse manures will, during the winter, decay, and in nature's laboratory become in a state to be available as food for the plants intended as a crop the following spring. There will be no loss from these decaying matters, by their elements escaping in the atmosphere, for clay, like carbon, absorbs and retains the volatile results from decomposition. I look on deep plowing, of stiff land, in early winter or autumn, as equal to a dressing of manure. The land becomes friable and is put in a state to liberate the elements of fertility, which have been hermetically sealed, and only to be broken by frost. Thus acted on, the land will not bake and clam together in great blocks, as it does when plowed in spring, under the influence of the heavy rains and hot suns of that season and early summer.

Farmer's Clubs

Ought to be formed in every neighborhood, for the purpose of interchange of opinion and particularly for experimenting with the different seeds, fertilizers, systems of farm management, and the usefulness as well as profit of the different breeds of stock, poultry, &c. Each member experimenting with a different fertilizer, for instance, and comparing notes, and these experiments communicated from club to club would result in a correct and uniform judgment as to the relative value of these market manures, which cost in the aggregate to the farming community annually immense sums, most of which is a dead loss to a worthy, but easily duped class of our citizens. The farmer generally is honest as the day, and unsuspicuously credulous, and therefore an easy prey to the crafty and plausible man of "sharp practice." By means of these clubs the worthless fertilizers would be swept out of existence, and the dishonest dealer would be exposed by a concentrated power which could not be resisted, while the honest, conscientious manufacturer would reap a just reward for his skill and integrity, and thousands on thousands of dollars would be saved by the farmers to be devoted to other profitable investments. Whenever they have been keep up with spirit and interest, they have done great good, and their importance has been manifested by the improved condition of husbandry in the entire neighborhood, wherein their beneficial influence has been exerted. As auxiliaries to the State Association they would be of incalculable aid. The monthly reports from these clubs, published in the *Maryland Farmer*, would be

instructive to all, and shed abroad a light over the field of agriculture that, at present, is resting in gloom, and almost darkness. The home-life experiences of our enterprising farmers would be thus brought to the view of their neighbors for their edification and future exemplification in practice by themselves. Every man at each meeting would get one or more new wrinkles for his future benefit. It is the attrition of minds that produce new and useful ideas, which often lead to practical results of grand importance.

While on this subject, I would respectfully suggest that our State Society pays too little attention to discussion and interchange of opinions upon matters of vital interest to the workers of land. There should be special meetings, quarterly or monthly, devoted to this. Another suggestion I would make. It is not necessary to have so many small premiums for agricultural implements, that are paraded year after year; let these premiums be concentrated and offered for the last invented and best, or most improved article of general use to farmers. In a word, let there be but one or two premiums in each class and leave it to the committee to say which new invention of that class is most deserving of a premium because of its ingenuity, skill and science exhibited in its manufacture, and because of its labor-saving properties to a greater extent than any other article of its class. This would stimulate the inventive minds, and excite to activity, the physical energies, of our mechanics and artizans, resulting in the invention of really practical, valuable labor-saving machinery, instead of the present flood of gilded toys and worse than useless humbugs.

The Season.

What is to be the effect of this wonderfully propitious season? will it be a year of fortune to our farmers? vegetation is more forward than it has been for years past. The greatest crop of apricots I have ever seen. The locust is more luxuriant in its blossoms than ever known, for as I write, this 8th of May, the brisk breeze is whirling the blossoms in such crowds as to cheat one into the idea that it is a heavy snow storm. The fish have been uncommonly abundant in the great rivers, and scarce in the smaller streams, as if nature meant to dictate to the authorities to supply the small streams with spawn and let the Potowmack alone; that is, go on with pisciculture in our own streams first, and not wait for the joint action of Virginia. Let our fish commissioners go on and do what they are required to do, that we may the sooner reap the reward of our outlay and enterprise. Is the earliness of the season as indicated by the abundance of loaf cabbage, lettuce, peas, strawberries, &c., a hint to the farmers from dame nature, to be up and stirring in all the rural districts, to secure the nomination to the legis-

lature of only such men as are zealous in the cause of agriculture, and will give it such attention as it never yet has received; redeem it out of the deep mire that politicians have put it in; elevate the farming class and foster its interests by passing wholesome laws for its protection, instead of trying to find that last straw which will effectually break the Campbell's back, which it would seem has been the aim of all the wise acres that we have heretofore had to legislate for, not us, but cliques, classes, and corporations, until the pack horse—agriculture—can bear no more, and indeed is "*on the lift*" and *will die* unless some of the vampires are removed from its sinking carcass.

Three Crops at Once.

A correspondent of *Purdy's Small Fruit Recorder* details an experiment in planting apple trees, peach trees, and strawberries, on the same piece of land. The apple trees were forty feet apart each way; then three peach trees to every apple, making them stand twenty feet each way; then, strawberry plants in rows three feet apart, and a foot in the row, leaving a space bare next the trees. The strawberries have paid for cultivating the trees; but they become less as the trees grow larger.

This kind of management does well, where the soil and culture are good. If the ground is quite rich, the apple trees will grow fast enough under good cultivation, with the drawback of the peach trees between, and of the strawberries covering the surface. Potatoes, beans or carrots, might be substituted for strawberries, as the soil variously admits, and according to the wishes of the owner. It is much better to occupy the ground with strawberries or roots, keeping the soil otherwise clear and mellow, than to allow it to become infested with weeds with a hard crusted surface. If the most is to be made of the ground at once, peach trees may be planted with propriety between the apple rows; but the heads should be kept well shortened in when older. If the land is of moderate fertility, they will lessen the growth of the apple trees materially in a few years, and the owner must balance his preferences for a good crop of peaches, and for a rapidly growing apple orchard, as he may desire. On very rich land, all these crops may grow at once quite as fast as may be for their good.

LARGE PICKING OF STRAWBERRIES.—The *Norfolk Journal*, of the 10th of May, says:

Mr. Anderson on Monday shipped from his farm near this city, fourteen thousand quarts of strawberries, the fruits of one picking from his patch of nearly one hundred acres. The culture of strawberries is one of the most profitable branches of the truck trade in this vicinity. More can be made from one acre in strawberries, than from ten in corn,

To Exterminate Rats.

Being sadly plagued with rats about my house and farm buildings, I tried in vain to catch them; they are too cunning to be trapped, and to lay poison I dare not for fear of killing my dogs, cats and hogs, and to wait for them with a gun was a loss of too much time, though I have dropped three at a shot. At last I purchased two goats, which I kept about my fold, barn and stables, the pigstyes being in the fold. In a short time all the rats emigrated—they evacuated the place, cleared right out, every Jack of them, and I have not seen a single rat about the place for upwards of three years, but my neighbors who are within eighty rods have plenty of all sizes and ages. Perhaps it is not generally known that where there are many horses stabled together very little sickness prevails if there is a goat kept about the yard and stables.

A friend of mine in Iowa was so infested with rats that they were to be seen running about his fold and farm buildings by the half dozen at a time and playing like rabbits, (his farm buildings are extensive.) He tried the goat system and all the rats to his astonishment have entirely quit his premises. He could not leave a rug or buffalo robe in the stable a single night without having it cut to pieces by the rats. The smell of a goat is obnoxious to the nostrils of rats, and the two won't be friends and companions on any account whatever. Farmers and livery stable keepers, try the goat, and if it don't answer all expectations, write and blame John Whatmore, Bridgenorth Farm, Ill.—*Ger. Tel.*

Salt for the Corn Grub.

The corn crop has several formidable enemies to contend with, and among them is the grub, which sometimes literally destroys whole fields, or damages the crop seriously. One of the best and most convenient remedies—perhaps the very best ever suggested—is the application of salt as soon as the plant makes its appearance above ground, prepared and used in this way: Take one part common salt and three parts plaster or gypsum, and apply about a tablespoonfull around each hill. It will be found to be a sure protection. The mixture should not come in contact with the young plants, as it may destroy them. This method has been tried over and over again by some of the best farmers of Pennsylvania, Delaware and Jersey, and when properly applied has never failed to be perfectly successful. We hope our farmers, who have reason to fear the depredations of the grub, the present season, will try this mixture, leaving a few alternate rows of corn without the salt, and communicate to us the result. The application also acts as a first-rate fertilizer, and will more than pay for itself in benefitting the crop.—*Germantown Telegraph*.

WHEAT CULTURE.

To the Editors of the Maryland Farmer.

Your valuable magazine comes to hand monthly, in which I always find many interesting articles on agriculture and its kindred sciences. I wish, therefore, to contribute a few lines to its columns. It would greatly enhance the value of your popular magazine if all practical farmers would do so; I am convinced that farmers could assist one another in that way, to their mutual improvement. One of the first leading facts that arrests the farmers attention is the gradual deterioration or decrease of wheat per acre. In a number of the Western States, where the yield was thirty bushels per acre, farmers are now raising only from twelve to fifteen bushels. In England, and other European countries, the yield is increased from twelve to thirty, and more in good seasons. There seems, at the first glance, that something is going wrong with us farmers in regard to wheat culture. Are we bad farmers? or is our land getting poor? There is something wrong; these facts suggest painful reflections, and indicate that our great skill is too much in making agricultural machinery, and not taking into consideration that we are exhausting the natural wealth of our country; the same wasteful and exhaustive process is undoubtedly still continued. There is certainly a remedy to restore this exhaustive and improper system of wheat culture, and it would not be a difficult undertaking to restore the lost ingredients, if a judicious system were adopted, although it would cost the country to do it, in a year or two, the enormous sum of one thousand and five hundred millions of dollars. In a score of years the lost fertility could be replaced, if a judicious system could be devised and followed up; continual cropping takes from the soil a certain part of its fertility, such as lime, magnesia, potash, &c., unless these are restored to the soil in the form of home manure or other fertilizers, the land will be exhausted and reduced to poverty. Millions of acres in the Southern States reduced to poverty, will now cost an immense amount of labor and large sums of money, before they can be made to produce wheat. A better system must be resorted to in the cultivation of wheat, if we wish to keep pace with the wants of a growing population. The great deterioration of our wheat is attributable to various causes; 1st, in not restoring the lost fertility; 2d, rotation in crops; 3d, sowing imperfect seed; 4th, not preparing the ground properly. It is a great mistake to sow imperfect seed; good and plump seed should be selected. Every wheat grower should sow a few acres expressly for seed, with only one bushel to the acre, without grass seed. Thin seeding will make large heads and large kernels, by this process

good plump seed could be obtained, which is of the greatest importance. By sowing poor and imperfect kernels our wheat deteriorates very much in quality. Thick seeding in general is an evil. As our population increases, wheat will be in greater demand, and as a great agricultural nation we ought to export large quantities annually. The wheat plant is susceptible of improvement, and by following a judicious system the yield can be greatly enlarged. A better system is now being commenced in Maryland, and our farmers are beginning to replace the lost fertility, differing with the western farmers, who apply the torch to the straw ricks to get them out of the way.

BALTIMORE COUNTY.

THE CURCULIO SEASON.

As the season of the curculio is again at hand, we have the usual number of certain remedies for its extermination. Within a year or two this insect has become of so much importance that "patents" have been taken out for newly-discovered destroyers, and pamphlets written setting forth their virtues. Still we have little or no faith in them. There was one started in Michigan a year or two ago, which at first looked as if there might be something in it; but turns out to be of benefit only under certain circumstances, and by no means generally protective.

We have been told of certain plums said to be proof against the curculio, but on trial have found them not to be so in any degree. The Miser plum, so-called, it is true is an exception; but this can scarcely be said to be a plum; and the reason for exempting this one, we presume, is that it is good-for-nothing. The shaking process, if resolutely pursued—and if anybody thinks the plan worth the cost—will generally prove successful. Also, those who plant their trees in chicken-yards, or force them to lean over pools or streams of water may, if they choose, have plums.

On the other hand, a farmer in western New York had last year an abundant crop of plums, and did nothing to them. He says, "I neither shook the trees, syringed with whale-oil soap water, or squirted any other foul decoction into their leafy branches. Barring the usual cultivation I simply let them alone." He adds that he might have boasted grandly of his success had he applied any of the many "remedies;" but as it is he "headed off." He thinks he may in future "try something" just to give him a chance to crow over his discovery! This man has his eye-teeth out and will do. And others taking a hint from what he did not do, may go and do likewise!—*Germantown Telegraph.*

Live up to your engagements.

Horticultural.

THINNING OUT FRUIT.

It may be considered somewhat early to make suggestions on the subject of thinning out fruit, but it can never be too early to give good advice, and we think as pear and peach trees are beginning to show their product, thinning out process may be begun at almost any time.

It is true the operation can be performed conveniently only upon such trees that are not over large. But it should be especially attended to in young trees, which frequently over-bear, to the great injury of the health of the trees, as well as the quality of the fruit. To obtain the finest specimens, they should not be allowed to grow in clusters, or in contact with each other, and all that exhibit the least imperfection should be removed. What is lost in number will be doubly made up in size and flavor. This should be remembered. Many persons regard the thinning out of peaches, pears, and apples as so much loss; but they are not judges of fruit, and have no knowledge of its proper culture. They want as large a crop as possible, letting the quality take care of itself, no matter how much the tree is damaged, and what effect it may have on next year's crop.

On some of our own pear trees last year we removed three-fourths the entire crop, and afterwards found the tree to contain more than was advisable. We counted yesterday on one small dwarf tree on our premises, 194 well set pears, of which we shall not allow more than one dozen to remain!

It goes hard with some people to diminish the quantity of fruit upon their trees. Sometimes they plead want of time; but this is not admissible, for if they have not time to attend to the proper cultivation of fruit they should abandon it altogether. The real cause is their greediness. You can't make them believe that they are the gainers by destroying a portion of the crop, saying that nature is the best judge as to the quantity of fruit. Such persons have no practical knowledge of fruit-raising, and the sooner they give it up the better it will be for them, their pockets and reputation.—*Germantown Telegraph.*

FOOD FOR MILCH COWS.—The *Country Gentleman* says: Several correspondents have lately inquired for the best food to feed to milch cows. We have seen a recent statement, which appears to be founded on correct practice, that where a steaming apparatus is at command, the best food is obtained by cutting good, well-cured corn stalks, a quarter of an inch long, and to steam this chopped material with beets or carrots cut fine, with an addition of one or two quarts of wheat shorts to every bushel.

HORTICULTURAL NOTES.

TO KEEP THE CURCULIO FROM PLUM TREES.—The following remedy was tried by a friend, of Maryland, with success.

As soon as the tree is in blossom, and every few weeks afterwards, paint the trunk of the tree from the ground up, two feet, with turpentine. Turpentine is obnoxious to insects.

THE YELLOWS IN PEACH TREES—I give the experience of a friend, in restoring his sickly yellow trees to vigorous fruit bearing.

The earth around the trunk of the tree was taken away, until there was a hole made of the size and depth of a common wash-basin, coal tar from the gas works was then poured on the roots, up to the edge of the ground; rags and bronze paper were wrapped around them to keep off the earth, and the soil filled into the former level. The trees sent out new leaves, and were cured. The worms in them, also, were destroyed. This protection will last for two years.

Another Restoration.—A lady finding some coal dust in the cellar of a house she had rented, ordered it thrown around a forlorn old peach tree in the yard, which she expected to have cut down; but its new dressing seemed to inspire it with life. It soon put forth an extra growth, and had a fine crop of peaches. Perhaps the sulphur in the coal imparted health to this "ancient citizen," or exterminated its enemies,—the worms. There is an acid apparently in coal, which destroys the fish in the Schuylkill. Perhaps it is this acid the peach needs, as Prussian acid is found in the kernels of its fruit—*Cor. Gardeners Monthly.*

DO NOT NEGLECT THE YOUNG GRAFTS.—It should not be forgotten that grafts, which have been set this spring, when they once fairly start to grow they mostly go ahead rapidly, and becoming laden with leaves, and the hold they have upon the stock being very slender, they frequently break off. Birds will also light upon them, and their added weight snaps them. They, therefore, should be attended to, and pruned, when they have shot eight to ten inches, by one-half. They usually make better branches by this abscission, and in no event is there any injury. Grafts set last spring should also be examined, and where the wax has become loose and fallen away, or where the split has widened, additional wax should be supplied, otherwise the water gaining entrance will either kill or weaken them, giving them an unsightly appearance, and at least stunting them for perhaps years. Sometimes they never recover from it.—*Germantown Telegraph.*

Never speak evil of any one.

The Florist.

FLORICULTURE---FOR JUNE.

PREPARED BY JOHN FEAST, Florist, Baltimore.

May has passed, and during the greater part of the month we had fine weather, with sufficient rain to make rapid growth, and all hardy plants at this time are flowering remarkably fine. Roses never were in better order and quite free from that pest that infest them at times, and in the absence of late frost we may expect a bountiful season for fruit of every variety. The planting of all tender things will by this time be done, as the season has been fine, apprehending no danger from cold nights.—Plants removed from the houses to out doors, place in a suitable situation for the summer, and somewhat shaded from the mid-day sun if possible. The different kinds that have not flowered in the house will now be coming in flower, and will require to be carefully watered.

Cactuses, Amyrillus, and such as are kept in the house will need more water when in flowers.—*Clematis* will now make a fine show and should be neatly trained to trellises or rods, as they are easily broke by the wind, the varieties are now getting numerous, and no hardy plant is more deserving of a place in the garden than the Clematis, which are mostly hardy and will bear our winters if planted in a proper situation, not too wet for them, which will soon cause them to decay. The different kinds of bulbs as *Tulips*, *Hyacinths* and such, take up at a proper time, and plant *Tuberoses*, *Ferrarias*, *Dahlias*, &c., in the same ground, if no other place can be had; if the ground requires a top-dressing of fresh soil, such may be advantageous to it, this is better than too much manure, which only causes growth and little bloom.

Mignonette, and other annuals, now save, if any room is left after the bedding plants are put out, and those that are too thick transplant, for they seldom flower when too much crowded; it is a great mistake in sowing all flower seed too thick, instead of making two or three circles there should be many more which would result in more flowers and greater bloom, giving a finer appearance.

Carnations and *Pinks*, as they begin to flower tie up neatly to stakes, to protect the bloom, transplant seedlings if large enough, in their proper place for flowering. A dry situation is the best for them; no plant cultivated is easier destroyed by moisture than the Carnation.

All plants bedded out in pots ought to be carefully looked over after a heavy rain, as those having but little drainage will be filled with water, and if allowed to stand in this condition will soon injure the plants, and cause the foliage to turn yellow and decay, and often kills them. Such may be avoided by repotting once, to obviate the difficulty. Drainage in horticulture as well as agriculture, is the first step to success in all crops on rich or poor grounds.

The various plants propagated but have not been potted off as yet, if rooted, should now be done.—*Camellias*, *Grape Vines*, and others, prepare soil for

them, and when potted, place in a close frame or house for a time, until they recover, and show signs of their growing. Keep them shaded for a few days and give frequent syringing, which is calculated to give them a start, and make fresh roots in a shorter time than if left open or exposed to the atmosphere, without any protection and perhaps loose one-half for want of this attention. All plants that have been taken out of the houses, if not planted in the ground, should be plunged half deep in sand, or some mixture to protect the roots, as they are apt to be injured by the sun's rays, acting on the pots, thereby destroying the roots on the outside of the ball.

Besides attending to the exotics, care is required in keeping the grounds in order, and the lawns closely mown, which is the only mode to have a perfect turf. Letting the grass grow to seed seldom looks well after it is cut, and becomes coarse and unsightly. Instead of being mown twice or so through the season, it should be cut at least every month to look respectable. A top-dressing of guano or phosphate is advantageous in producing a fine color, and should be applied after the grass is cut; have the grass rolled before each cutting.

The borders and walks should be kept clean; an early hoeing is far preferable to leaving the weeds to run to seed; less laborers required by taking the matter in time, and it will be more effectual.

COLORADO AGRICULTURAL SOCIETY.

The following is a list of officers of the Colorado Agricultural Society for the coming year:

President—H. B. Pearce.

Secretary—Fred. A. Clifton.

Treasurer—Frank Palmer.

Executive Committee—W. N. Byers, Geo. T. Clark, Joseph E. Bates, J. H. Morrison, J. M. Veasey, H. G. Bond.

Superintendents of Classes—Class A.—Agricultural Department—F. C. Taylor.

Class B. Mechanics Arts and Agricultural Implements
—E. A. Willoughby.

Class C. Farm products, food, &c.—C. H. McLaughlin.

Class D. Horticultural and floral—Chas. Ruter.

Class E. Fine arts—John Armor.

Class F. Geological and mineral—Prof. F. Schirmer.

Class G. Poultry, sheep, swine, &c.—M. M. Trimble.

Class H. Horses, &c.—John E. Force.

Class I. Cattle.—J. L. Bailey.

At the last meeting of the Executive Committee, held at the Secretary's office, April 21st, the next Annual Fair was fixed for the 12th of September, extending to the 16th, inclusive.

AMMONIA AS CATTLE MEDICINE.—One of Professor Johnston's books on chemistry has a foot note explaining a use of hartshorn, a solution of ammonia in water, of much interest to cattle raisers. When cattle eat too abundantly of clover or other succulent food, fermentation takes place in the stomach, and "bloat" ensues. The fermentation produces carbonic acid gas, which is the immediate cause of the undue distension of the stomach. By administering hartshorn diluted with water the ammonia combines with the acid to form a carbonate much reduced in bulk. It also stops further fermentation. It is said to be much better than lime water, sometimes used for the same purpose.—J. A. Whitney.

RUST IN WHEAT.

As I have been employed in the labor of raising grain, of every variety sown in the latitude of southern and western New York, for almost sixty years, I venture to write upon the question : "Does the sowing of grass seed with winter wheat, at the time of sowing the wheat, dispose the wheat to rust?"

This question opens a range of thought altogether too wide for an article suited to your columns. A condensed answer may, however, be given by attending to the instruction given to the children of Israel. The words addressed to them are, "Thou shalt not sow thy field with mingled seed." He who formed the earth could not err as to the effect arising from an attempt to raise two or more kinds of productions in association.

It is said that the Japanese carefully weed all their grain crops. It is also said that the most intelligent English farmers cause their wheat fields to be explored by women and children, engaged in the labor of removing every weed.

I have always known that grass and weeds injure grain crops of every kind. It is a conclusion from which I cannot depart, that the growth of timothy, sown with wheat, not only greatly lessens the yield of wheat but also renders the wheat far more liable to injury from rust.

The only way in which the question can be definitely answered, is to try experiments. Set apart a plot of ground, divide it into compartments of convenient size to afford a just test. Keep one part free from weeds and grass, sow one with grass at the time of sowing wheat—another in the spring. After sowing the wheat carefully note the results. Then, and only then, shall we be in a situation to intelligently decide.

I infer that all the instructions given to the children of Israel are profitable to mankind in all ages and in all countries. The instructions of God are founded upon his perfect knowledge of everything. His instructions need not the confirmation of the chemist nor can they be invalidated by the political economist! God's instructions touch every transaction in the affairs of "the life that now is," and will safely guide us to a full knowledge of "the life that is to come." We are, therefore, exhorted to buy the truth and sell it not; also, to get wisdom, knowledge and instruction.

I will here state that the causes for blight upon grain are so various that if I could enumerate them the enumeration would fatigue. Sometimes I have seen fields blighted by rust when the ground was uncommonly free from everything but wheat.—Sometimes when there was much grass. From these circumstances I infer that atmospheric influences

independent of the condition of soil in the locality, destroy our crops. "Epidemics" prevail among men, and why may not "epidemics" affect vegetation.

RUFUS PEET.

P. S.—I add one more remark upon the subject of rust upon wheat. I once had a brother who lived in Farmersville, Cattaraugus county, N. Y. He informed me that he had sowed salt upon his wheat for several years. He sowed as much salt as seed. He assured me that he never had any rust to injure his wheat so long as he applied salt.

I have applied salt to wheat and oats I secured bright straw and good berry in every case. I never tried salt as a preventive against rust where grass seed was sown at the time of sowing the wheat.—*Germantown Telegraph.*

MARKET GARDENING IN THE UNITED STATES.—The census returns show, in the Eastern and Middle States, a decrease in the production of livestock and of staple grains, and an increase in vegetable and garden crops. Grain farming and stock raising are rapidly shifting to the West. Texas has shown an indefinite capacity to crowd the markets of the country with low-priced beef—a competition which the Eastern farmers cannot resist. The virgin lands of the frontier, with their unbroken fertility, are as yet too much for the worn soils of the older States, even with the advantage of scientific culture. Instead of bewailing these new conditions of production, the farmers of the East are turning attention to vegetable crops to supply the necessities of the large village and city populations that the last decade has amassed. Potatoes, turnips, cabbages, onions beans, eggs, milk, poultry, all find a profitable home market, and relieve the farmer from his most laborious tasks. The farmer must no longer be ashamed of his truck-patch, for here he finds his greatest profit.

THE WEALTH OF DORCHESTER COUNTY, Md.—The Dorchester county *Democrat and News* claims that that county is not so poor as its people generally represent. It says:

In conversation with the observant and well known Clerk of our county, who has a better means of knowing the financial condition of the people than any other man in the county, he stated that there were less evidences of indebtedness against the people at present than for any time in the last twenty-five years. Scarcely a mortgage or judgment is rendered in our courts once a year in favor of one abroad *vs.* a citizen. The small number of mortgages or judgments rendered are held at home, not abroad. The people are rapidly learning to live within their means. It is daily growing honorable to be without employment; loafing is the exception now, and not the rule, as it was ten years ago. All hail! to the glorious era that is dawning upon us—an era of plenty, wealth and greatness, with labor dignified!

The Poultry House.

TURKEYS AND CHICKENS.

I desire to write what I know of raising turkeys and chickens.

The recipes given for curing chickens of the gapes, such as whites of eggs, corn meal with pepper, wheat soaked in turpentine, and a number of others, are of little if any value. The gapes in chickens are caused by small worms getting into the windpipe. I have raised thousands upon thousands of chickens, bought and sold chickens, and believe that gapes is a contagious disease, for my chickens never had them until I bought strange chickens. I have tried many cures, and there are none that amount to anything except the horse hair. By inserting the horse hair in the chicken's windpipe you draw the small red worm out, and this at once relieves the chicken and the gaps are cured.

In regard to raising turkeys the best plan is to feed them on milk made into a cheese with wheat and wheat screenings. In time of rain keep them in the dry, for when they get wet they get draggled and die. Corn meal I have tried, and upon a clear examination I find that it does not agree with them, and in many instances kills them. Old turkeys, I think, do best out in the cold, on trees, rather than in sheltered places. Let every farmer be cautious of what he feeds his young turkies until they are eight to ten weeks old. After this period they will know what to eat.

I know that the foregoing is correct, for I have tried many plans, and experience is always the best guide.—*Reading Gazette.*

THE PRESERVATION OF EGGS.

The *Jurnal de Pharmacie et de Chimie* contains an account of some experiments by M. H. Violette, on the best method of preserving eggs—a subject of much importance in France. Many methods had been tried; continued immersions in lime water or salt water; exclusion of air by water, saw-dust, etc., and even varnishing has been tried, but respectively condemned. The simplicity of the method adopted on many farms, namely, that of closing the pores of the shell with grease or oil, had, however, attracted the attention of the author, who draws the following conclusions from a series of experiments on this method. Vegetable oil, more especially linseed, simply rubbed on the egg, hinders any alteration for a sufficiently extensive period, and presents a very simple and efficacious method of preservation, eclipsing any methods hitherto recommended or practiced.

Keep good company or none.

The Apiary.

FACTS IN THE NATURAL HISTORY OF THE HONEY BEE.

There are three classes of bees in a hive, the *Worker*, *Queen*, and *Drone*.

Queens are raised by peculiar food and treatment from eggs that would otherwise produce workers.

The worker is an undeveloped female. Workers in the absence of a queen sometimes lay eggs. These invariably produce drones.

The queen lives from two to five years. The worker from two to three months in the working season, and from six to eight during the season of rest.

The queen is perfected in fifteen or sixteen days from the egg, the worker in twenty to twenty-one, and the drone in twenty-four.

The queen usually commences laying from seven to twelve days after leaving the cell, and is capable of laying from two to three thousand eggs in a day.

The impregnation of the queen always takes place outside the hive, on the wing, and generally the fourth or fifth day after leaving the cell. Excepting in rare cases, one impregnation answers for life. The drone she has mated with dies immediately.

The eggs of an unimpregnated queen produce nothing but drones; and it is generally conceded that impregnation does not affect the drone progeny; consequently, the male progeny of a pure Italian queen is pure without regard to the drone she has mated with.

The queen and worker are provided with stings; but while the latter will use it upon any provocation, the former will only use it on her own rank. The drones have no stings.

One queen, as a rule, is all that is tolerated in ^{the} hive; but previous to throwing off "after swarms," two or more queens are permitted in the same hive for a short time; but the extra ones are soon disposed of. In case of superseding a queen, the old one is preserved until the new one is fitted to take her place. Queens have a deadly hatred for each other, and will destroy, if permitted, all queen larvae or cells in the hive, and will fight each other until there is but one living one left.

A frightened bee, or one filled with honey, is not disposed to sting.

A good swarm contains about twenty thousand bees.

A strong or medium hive, with a good laying queen, is never seriously troubled with the moth worm; but a hive without a queen or the means of raising one is sure to be taken by them.

Bees recognize each other by their scent.

The first one or two weeks of the young bee's life is spent inside the hive, as nurse or wax worker.

The range of a bee's flight for food is generally within two or three miles, much greater range is of but little benefit to them.—*National Live Stock Journal.*

THE CAUSE OF RUST IN WHEAT.

I have before me an article in last week's *Telegraph*, stating that it is getting to be the pretty general opinion among farmers that the sowing of grass seed, clover or timothy, in the fall with wheat, is the cause of rust in the same, &c.

I beg leave to differ from that article; first, clover is generally sown in the spring, in this region of country at least—the winter would probably destroy it; but timothy is usually sown with the wheat or close following it. If any person wishes to raise a crop of wheat and *rust*, I will give him a receipt how to do so. Sow your wheat very late in the fall, in order to not get much root, so that the frosts of winter may raise much of it out of the ground and cause it to perish; it will then start in the spring thin, grow rank, with a very dark color and ripen very late. You may then expect a good crop of rust. Yet if it is sown in good season, ground good, plenty of seed, timothy moderately, you may expect as bright straw as any of your neighbors, although they may have sown grass seed or no. Damp or rainy weather is favorable to smut, but that will come if it choose, grass or no. If the wheat is sown early, the timothy need not be quite so thick as was formerly the custom when sown later; the reason is it will supply itself with a stronger root. But the grass seed is of high importance, as the wheat crop will barely pay at the present prices of grain, labor, machinery, fertilizers, &c.

It is also claimed that grass seed sown after harvesting the wheat will produce as good crops the following year, as it would if sown with the wheat. Here I differ again, very much as to the timothy and clover, also, if it is sown after the wheat harvest; for we well know that we are very liable to have much dry weather after harvest, that would be much against its taking root; we also know that many weeds and much fall-grass, as it is usually termed, would be striving for the mastery and smother it out, so that in the following fall or spring we would have to put on our "specks" perhaps to find it; and to have a good crop the following season the chance I think would be slim. With even a wet autumn, the fall-grasses and other intruders would even more quickly, perhaps, choke the newly-sown grasses.—*Cor. in Germantown Tel.*

SAVING THE PLUMS.—J. J. Thomas, N. Y., has a plum orchard of eighty trees. Previous to 1866 he had obtained but very little fruit from the orchard on account of the curculio. Since then he has saved the fruit by jarring down the insects on sheets. An iron spike is placed in each tree, on which a sharp blow is struck.

Fertilizers and their Application.

My experience is that manures containing straw, hay and the like should be plowed under, but those containing little or no straw should be spread on. Coarse manures will rot much sooner if plowed under and they also serve to lighten the soil, and this is the one great want of those old farms which have been cultivated many years. Other manures should be applied on or near the surface, first, because if applied in any other way they lose much of their fertilizing properties by evaporation and by wash, while if applied on the surface in small quantities each year the crops receive all or nearly all the benefit,—and second, because the labor of application is much less. Viewing a fine farm burdened with a splendid crop of grass, I remarked to a friend on its fine appearance, that ten years before it was one of the poorest farms in the town, and that two things had made it what it now is. One was the present owner had built barn and with it a large, fine cellar in which he kept his farm manures until he was ready to use them, thereby saving all the solid and—the other cause was, he applied the greater part of his manures on his grass as top dressing.

I once had a field of grass nearly run out and not able to plow it, spread on about three cords of manure to the acre for three years and now it is as fine a field of grass as one would wish to see.

I have found plaster one of the best fertilizers for grass land on clay loam but not on sandy soil; and should like to hear the experience of those who have used it on such land.—*Cor. Maine Farmer.*

How to Improve Sandy Soils.

A correspondent in Baltimore county, Md., writes the *Country Gentleman* as follows:

Noticing an inquiry as to the most valuable fertilizer for a thin sandy soil, I have concluded to give you some experience of mine.

About twenty-five years since I came into possession of about nine acres of thin sandy land. There had been within, say three or four years previous, two crops of corn taken from it that did not exceed ten bushels per acre. I had it plowed deeply, and sowed heavily to oats. As soon as they began to ripen we plowed them in, and applied about seventy bushels of lime-kiln ashes to the acre; we then seeded it with rye, and also sowed clover and timothy. We cut a splendid crop of rye, and for several years mowed a good swath of grass, since which we have kept up a rotation of corn, then wheat or rye, followed by grass which has been either mowed or pastured; two of the years potatoes have taken the place of the corn. The corn has averaged from fifty to sixty bushels per acre of shelled corn, and the other crops have been above the average of the balance of a good farm. We have put but little if any manure upon it, except a moderate amount with potatoes. I may add that a large portion of this lot is so sandy that it does well for building purposes.

Ladies Department.

MY HEARTH AND HOME.

Amber light falling,
Orioles calling,
Sweet, in this maple we'll make us a nest"
Arbutus springing,
Faint incense flinging
Free to the winds of the spring-times unrest;
And to my hearth and home
Never the shadows come;
Only the sunshine of May, lighting hearth and home.

When home returning,
After the yearning,
Toiling and struggling, from dawn to the night,
There I find angels,
Blessed evangelists,
Chanting for me songs of peace;—rosy light
Glorifies hearth and home,
Never the shadows come;
Only the sunshines of joy, lighting hearth and home.

Then with fond greeting,
Rosy lips meeting,
Banishing mem'ry of all care and strife;
Eden regaining,
White entertaining
My angel-guests, darling children and wife—
And to my hearth and home,
Never the shadows come;
Only the sunshine of love, lighting hearth and home.

With eyes upraising,
Our Father praising,
For joy of living; and mostly for this,
Whatever sorrow
Came on the morrow,
To day He has given contentment and bliss!
And to my hearth and home,
Never the shadows come;
Only the blessing of God lighting hearth and home.

EDITH MEREDITH.

WAS SHE TO BLAME?

BY MRS. JULIA A. CARNEY.

"I do declare," exclaimed Mrs. John Smith, "if that Mrs. Marshall isn't the most shiftless woman I ever knew! She's the poorest housekeeper in the village."

"Yes!" chimes in Mrs. Jones, "she is the miserablest wife ever a man had. Who wonders her husband has no energy?"

"Not I!" responds Mrs. Smith, "he never has a dinner fit to be eaten, nor a room fit to sit down in when his work is done. His clothes are never mended until it is too late to make them look nice, and the children are always in a squall when he comes home. Poor man! I pity him from the bottom of my heart."

Whether the little sigh that followed this tirade, did come from the bottom of her heart we leave the reader to judge. It was a well-known fact, that before the aforesaid Mr. Marshall met pretty Lizzie Lewis, he had been a welcome guest at the house of Mrs. Smith's father, and it had been currently reported in the village, that John Smith had been accepted, in very chagrin, when the more favored lover proved inconstant.

These things were well known in the sewing circle, where all this gossip was going on, but no one ventured on opposing remarks, for Mrs. Smith was the wife of one of the few men of comparative wealth that the little village possessed. "Comparative," for men are deemed immensely rich in a small town or village, whose whole property would not amount to a year's comfortable income in a city.

Mrs. Foster, at whose house the sewing circle was holding its session, was a new comer in the village. She was a lady of high culture and sympathising heart. Being herself a housekeeper of undoubtedly excellence, she could afford to defend one whose character in this respect was assailed.

"Come! come! ladies," said she, with a thoughtful smile, "you are cutting up that poor woman's reputation, faster than you do the pieces for that quilt. Isn't it almost time to be sewing them all together again? It may be pleasanter work, besides being more serviceable."

Some received the gentle rebuke kindly, as it was inten-

ded, a few among whom were included Mrs. Smith, seemed inclined to resent and debate the matter.

"Well, for my part," said Mrs. Smith tartly, "I think if a woman neglects her husband and children in that way, she must expect to be talked about."

"Are you sure she does neglect her husband and children?" asked Mrs. Foster quietly.

"Sure!" was the indignant reply, "Are not the children always ragged and dirty? And don't he always have to wait for his dinner, and hold a squalling baby while she hurries it up?"

"As for the children," said Mrs. Foster, now really roused for the defense, "I happen to know, that the little crowd are all carefully bathed every morning, at all seasons, and in hot weather every night before retiring. It is not their mother's fault that they dig in the dirt all day, while she is busy with other work, and their rosy cheeks and bright eyes would indicate that they are far better off, than those who are *kept clean* by being deprived of air and exercise. With regard to the husband, I would simply ask, if it is such a hardship for him to amuse his own baby a half-hour's time while his overtasked wife hurries up the family dinner? Had we not better give a little pity to her, who is obliged to take care of it all day in the midst of so much work, and all night, when she so much needs rest?"

"I declare I never thought of that," murmured several ladies with pitying looks.

"She might, at least, wash her own dress once in a while," spitefully replied Mrs. Smith.

"It would be very easy, for you, Mrs. Smith," responded the defender of the absent, "to order your servant to wash a calico dress, that is, if you ever condescended to wear one. It is not quite so easy for a poor woman who has but the one cheap print, to keep it always clean and whole, in the midst of so much dirty work, and with that little crowd of children claiming every moment's time."

"I declare, Mrs. Foster, you are quite a Woman's Right's woman!" said Mrs. Jones, anxious to turn the conversation, and hide Mrs. Smith's too apparent discomfiture.

"Any kind of rights, you please, Mrs. Jones," said Mrs. Foster, smilingly, "so they be really rights, and not usurpations. I will not even restrict you to *human rights*, as some have done, for even the birds of heaven, and the beasts of earth, have their rights also, as sacred in the eye of their Maker as are our own. The woman who gives her whole time to her family, and even overtasks her slender stock of physical strength for them, while her brain is constantly occupied with a routine of petty economies, and her temper grows irritable through want of sleep and the constant strain upon her nervous system, is often condemned by us as a poor housekeeper, because she cannot work the miracle of accomplishing certain desirable results with insufficient means. Meanwhile, other women, with ample means, few or no children, and every kind of convenient arrangement in their houses, perhaps well-trained servants, or womanly daughters to assist, are complimented as capable housekeepers because neatness and order reign in their households."

Meanwhile the careless or indolent husband, who spends money enough for tobacco, in a few weeks to buy his wife a decent dress, or in a few months a sewing machine, a wringer or some other assistant in her labor; and who wastes time enough in lounging round smoking the vile weed, to lend her a helping hand occasionally when some heavy work is to be done, is really pitied as a martyr, because he has to wait half an hour for his dinner, or tend the worrysome child whose nerves have been tuned to agony by that very tobacco smoke."

"Dear me! Mrs. Foster," laughed some of the ladies, "what a public lecturer you would make!"

"I should pity your husband," said another, "if he were a user of tobacco."

"Or if he ever offended you in any way," sneered a simpering old maid, who believed that the least difference in opinion was a proof of matrimonial infelicity.

The circle soon after broke up, leaving Mrs. Foster to reflect, that if a few were offended with her for thus expressing her opinions firmly and earnestly, there were, probably, many present, too timid to rally around her, upon whom her words might be as good seed to re-appear in the harvest field of life.

Lizzie Marshall sat alone in her dirty kitchen, nursing her fretful babe. The child was teething, and having been left to the care of the older children through the day, was determined now to have its mother's attention. By dint of resolute and continued crying, it had gained its purpose, although the weary woman looked with a sigh from the long line of clothes just hung to dry, to the tubs of suds left to scrub the floor, and thought of the supper not yet begun.

She had seen the ladies pass her house, that afternoon, upon their way to and from the sewing circle. They passed lightly along, chatting gaily with each other. The few who

looked towards her humble home, did so with a sneer or word of disapproval, such as "washing this late in the week;" "In the suds, as usual," or something as little complimentary.

One of these lightly uttered remarks had reached Lizzie's ear, as she stood partially concealed by a clump of bushes, upon which she was hanging the last pieces of the wash.

Words are keener than swords. This one little sentence had wounded Lizzie worse than a blow. As she sat there in the gathering twilight, with her half-sick babe in her arms, she felt willing to have it die, lest its after life should be one of toil like hers. Only for a moment she looked back upon the happy girlhood which knew no care, and the tears fell thick and fast.

A gentle rap on the door, and then Mrs. Foster appeared. Seeming not to notice her agitation, she seated herself by Lizzie's side, and took the now quiet babe in her arms.

"Is baby better to-day? You should not do so large a wash in one day, or you will worry his food. You try to be too smart, dear!" I noticed your long line of clothes from the window, and as I had looked for a larger number than come to-day, I thought you would let me bring you in a luncheon, lest you should tire yourself still more in getting supper. You really must take it, for baby's sake. Nursing mothers must take all the help they can get. Those who have no such treasures to be proud of, may be proud about something else, if they like."

The child knowing, as every child does, the tone of genuine kindness, was nestling down in her arms as if in its own cradle.

"He will tire you," said Lizzie, "Susy will rock him to sleep! Here, Susy! Susy!"

The little girl came in with a discontented air, for she had been trying all day to amuse or hush him.

"Susy! Oh! No indeed!" said Mrs. Foster, smiling pleasantly to the little girl. "Susy will spare me the baby for a little while, and lay the dishes on the table for her tired mother. See, there is a nice white cloth already spread. Put the dishes on neatly my little girl, and then run over to my garden, and get a nice little bouquet to make it look bright. I love flowers on the table, don't you, Susy?"

"I love flowers everywhere!" exclaimed the child eagerly. "If mother only had time to plant them, and take care of them as you do, I should be so glad."

"Mother has prettier flowers to take care of than any of mine, so you must do that yourself. Come in next spring, where I am planting my garden, and I will give you some seeds, and tell you how to manage them. You had better get your father to give you a corner of the yard for a little flower bed. I will give you some bulbs this autumn, and early next spring, some rose bushes, and other hardy shrubs, which will keep you supplied with flowers all the year."

By this time, the child with light steps and smiling face had prepared the supper table, and now stood hesitating.

"Please, Mrs. Foster, I am afraid I might gather some flowers you did not intend to have broken, or injure some of your nice plants."

"I will go with you dear, as baby is now sleeping nicely. Don't have him rocked much, Mrs. Marshall. It causes tendency of blood to the brain, and makes him only more fretful when he wakes. Let me help you lift this tub of suds outside the door, and leave the floor unwashed till morning, won't you dear? Then you can rest a little, till your husband comes to supper, and it won't look half so sadly to him as an overworked wife."

She left the cottage, but how had her short visit changed everything to Lizzie. She was rested both in body and mind, and the truth was, that the mind had needed it most.

It is so with most overburdened housekeepers! The hurrying round of little duties, each trifling, yet each necessary to the great whole, family comforts, presses upon the nerves, so jars the sensitive spirit, as often to destroy the very object it seeks to accomplish.

Lizzie's husband was so surprised by the neatly laid supper table, and his little wife's smile of welcome, that his worried business look passed away at once, and when the little girl returned, bright and happy, with her bouquet of flowers for its centre, no one looked under the pleasant supper table, at the tired woman's unwashed floor.

Weary wives! Busy mothers! blessed with too many of those treasures which yet you would not spare, to even know an hour of perfect rest, do not worry because your work is never done. Do what you can, and leave the rest until another day. You will be refreshed for more endurance to-morrow. Envy not the neatness that reigns in the childless home! For worlds you would not exchange places with that woman, therefore leave her in peace to the order and taste, and elegant leisure with which she wisely adorns her heart's void. Bear what you may of life's burdens, and lay the rest at His feet who hath said, through the Psalmist, "who goeth forth and weepeth, bearing precious seed, shall doubtless come again with rejoicing, bringing his sheaves with him."

WHITE-WASH, CEMENT WASH, &c.

A correspondent at Washington City sends the *Country Gentleman* a copy of the instructions issued by the Light House Board to the Keepers of Light-Houses, in relation to White-Wash, Cement-Wash, &c., from which we extract the following recipes:

White-wash.—The following recipe for white-washing has been found by experience to answer on wood, brick and stone, nearly as well as oil paint, and is much cheaper:

Recipe.—Slake half a bushel of unslaked lime with boiling water, keeping it covered during the process. Strain it and add a peck of salt, dissolved in warm water; three pounds of ground rice put in boiling water, and boiled to a thin paste; half a pound of powdered Spanish whiting, and a pound of clear glue, dissolved in warm water; mix these well together, and let the mixture stand for several days. Keep the wash thus prepared in a kettle or portable furnace, and when used put it on as hot as possible, with painters' or whitewash brushes.

Cement Wash.—*Recipe for cement-washing light-house towers on the outside.*—Take of fresh Rosendale cement three parts, clear sand one part, and mix them thoroughly with fresh water. This will give a gray or granite color, dark or light, according to the color of the cement. If a brick color is desired, add enough *Venetian red* to the mixture to produce that color. The cement, sand and coloring matter must be mixed together. If white is desired, the walls, when new, should receive two coats of cement-wash, and then white-wash. After the work has received the first coat, a single coat every three or four years will be sufficient.

It is best to thoroughly dampen the wall with clean, fresh water, and follow immediately after with the cement-wash. This course will prevent the bricks from absorbing the water from the wash too quickly, and will give time for the cement to set. Care must be taken to keep all the ingredients of the cement wash well stirred during the application of it.

The mixture must be made as thick as it will admit of to be conveniently put on with a white-wash brush.

Dr. M. F. Bonzano's Recipe for preparing caustic potash lye, for removing old paint from iron.—Dissolve two pounds of potash in a bucket of water; add about one and a half pounds of slaked lime, and stir it well. With a mop apply this mixture to the paint, and after a few minutes it may be easily removed by scraping. As rapidly as the old paint is scraped off, rinse the iron with fresh water, and dry it. This will leave the iron clean and bright.

A Chapter of Facts.

Space is valuable in a newspaper, and it is therefore proposed in this advertisement to condense a variety of facts, important to the public, into a small compass. Those facts refer to Hostetter's Stomach Bitters—what that celebrated medicine is, and what it will do. In the first place, then, the article is a stimulant, tonic and alterative, consisting of a combination of an absolutely pure spirituous agent with the most valuable medicinal vegetable substances that Botanic research has placed at the disposal of the chemist and the physician. These ingredients are compounded with great care, and in such proportions as to produce a preparation which invigorates without exciting the general system, and tones, regulates and controls the stomach, the bowels, the liver, and the minor secretive organs.

What this great restorative will do must be gathered from what it has done. The case of dyspepsia, or any other of indigestion, in which it has been persistently administered without effecting a radical cure, is yet to be heard from, and the same may be said of bilious disorders, intermittent fever, nervous affections, general debility, constipation, sick headache, mental disabilities to which the feeble are so subject. It purifies all the fluids of the body, including the blood, and the gentle stimulus which it imparts to the nervous system is not succeeded by the slightest reaction. This is a chapter of facts which readers, for their own sakes, should mark and remember.

USEFUL RECIPES.

The following recipes we glean from Parks' *Treatise on the Horse*:

SORE THROAT.—Symptoms: the horse hangs his head down, chews, but cannot swallow; throat swollen and feverish. Bathe well with my Wizard Oil. Apply a poultice of wheat bran wet up with a strong decoction of red oak bark. Give him tepid water to drink, with moderate exercise. If he is feverish, bleed him two gallons from the neck.

THROAT DISTEMPER.—Is nothing more nor less than a bad cold. As soon as you discover that your horse has distemper, bleed him two or three gallons from the neck. Give him a quart of good whiskey per day. Poultice the neck with wheat bran. Give him a tablespoonful of assafedita dissolved in alcohol. Give him plenty of gentle exercise. Let him inhale smoke from tar, feathers and old leather, burnt in a pan, held to his nose.

FISTULA AND POLL EVIL.—These sores are produced on the shoulder and poll by a bruise on the muscles, causing swelling and fever. The enlargement may be reduced and scattered by blistering, roweling, and using my Wizard Oil. After it breaks, the pipes must be eaten out with caustic potash; after the potash has been on forty-eight hours, dress the sore with four ounces spirits turpentine, four ounces tallow, and two ounces calomel, well mixed together; the potash and ointment should be applied every two or three days; keep the parts affected clean with soap and water.

WEAK OR INFLAMED EYES.—Make an incision in the small vein on the side of the face, five inches below the eye, so as to bleed freely, rowel below the eye on the jaw-bone, apply a blister just back of the eyes, wash well with cold water three times per day, dissolve eighteen grains sulphate of zinc, ten grains sugar of lead in six ounces of soft water, and with a small glass syringe apply the wash to the eye once a day; if this does not relieve in five or six days, bleed two gallons from the neck-vein, give him a physic-ball, grass, or bran mashes.

PHYSIC BALL.—One and one-half ounces aloes, three drachms of gamboge, twenty drops oil of juniper; make it into a pill with thirty drops molasses, wrap it up in thin paper and grease it; draw out his tongue with the left hand, place the gag in the mouth, and run the pill back with the right hand until it drops off; let the head down and give a sup of water. First prepare the horse by giving one or two mashes.

SPRAINS IN THE STIFLE.—Symptoms: the horse holds up his foot, moans when moved, swells in stifle; this is what is called stiffing. There is no such thing as this joint getting out of place. It gets sprained the same as any other joint, and the patellar may slip from its place which acts as a stay to the joint. The tendons and ligaments become contracted, and lameness follows. To relieve it, foment the joint well, stimulate it with some strong liniment or a slight blister.

RECIPE FOR SOFTENING THE FEET OF THE HORSE.—Apply a poultice of two quarts of linseed meal, two quarts of rye meal, one pint of salt, one-half pint of tar.

COOLING LOTION.—One pint of vinegar, one pint of alcohol, one pint of water, one half pint of salt.

COOLING DRINK.—Two gallons of water, one half pint of salt.

DOMESTIC RECIPES.

BROWN BREAD—COTTAGE CHEESE.—We are sometimes amused and always interested in reading the recipes on cooking, but never thought our knowledge sufficient to instruct others through the medium of your paper; but on reading the one in a late number on making brown bread, or bread out of unbolted flour, we concluded to throw it in a little mite. Our manner of making brown bread is to take warm water enough to make a loaf the size wanted, put in a dessert spoonfull of salt, five tablespoonsfull good lively yeast, stir in the flour to thick batter, and stand it in a warm place to raise. A couple of handfuls of fine corn-meal some think an improvement; when light, grease a pan, stir the sponge briskly, and if any indications of sourness add a teaspoonfull of bread soda, and bake in a moderate oven. It is much better than when kneaded.

COTTAGE CHEESE.—Our plan is to take the clabber in a vessel about half full, and pour boiling water into it, let stand a minute or so, then take a large spoon, or stick for the purpose, stir it well and let it settle, then drain off the whey and add cold water; let it stand until wanted, then mash fine with the hand, add some salt and good rich cream. It makes an excellent dish for tea, and we like it much better than the old-fashioned way of setting the cans or pans in boiling water, which does not extract the acidity as our way does.

I do not wish to find fault with any one, but think the charge about having the pans, hands or anything of the kind clean, is a slur, as all decent folks know the necessity of cleanliness in everything.

A NICE CAKE.—Two cups sugar, one of butter, one of sweet milk, three of flour, one teaspoonfull of soda and two of cream of tartar, eight eggs; flavor with lemon.

FRENCH CAKE.—Two cups of sugar, half cup of butter, three of flour, half cup milk, three eggs, two tablespoonsfull cream of tartar, one of soda.

DOUGHNUTS.—One cup sugar, one cup of sweet milk, one egg, one teaspoonfull cream of tartar, a little salt and nutmeg, one half teaspoonfull soda; mix as soft as can be kneaded.

SAVING SOAP GREASE AND MAKING IT UP.—In order to keep soap grease clean and sweet during summer, run off one lye and boil it down until it will eat a feather, if put into it. Then put away in an iron or other vessel, and throw your meat rinds and scraps therein. When you make your soap boil down lye as before, put it into an iron kettle, and this grease with other, if you have it, and let it boil and stir occasionally. In order to test the proportions of grease and lye, take some out into a dish, let it cool, and if it does not get hard your soap wants more boiling and more lye; if too much lye it will settle to the bottom, when add more grease and boiling. The experienced can test the presence of too much lye by its keen bite, and its absence, vice versa, by a touch of the tongue. A half day is time enough ordinarily to make a kettle of soap, which when done, should cut out like gingerbread.

AN EXCELLENT FURNITURE POLISH.—Mix well together a pint of linseed oil, a pint of alcohol, a pint of vinegar and one ounce butter of antimony. Shake before using.

SOFT GINGERBREAD.—One cup of sugar, one of molasses, one of butter, three eggs, one cup cream or milk with a teaspoon of soda in it, and mix two teaspoons of cream of tartar with part of the flour; stir in flour enough to make rather stiffer than pound cake; add a tablespoonfull each of cinnamon and ginger, ground. Bake in a dripping pan.—*Cor. Germantown Telegraph.*

The Dairy.

BUTTER MAKING.

As the butter season is approaching, every dairy woman will be glad to see what others have done in the same work. We, therefore, present the following statements made to the Middlesex Agricultural Society, last year, which we find in the *Massachusetts Plowman*:

STATEMENT OF MRS. W. STANIFORD.

This butter is made from the milk of four cows, Jersey and Ayrshire. The milk is strained into tin pans, two and one-half inches deep, and stand twenty-four to thirty-six hours, then skimmed; the cream is kept in stone pots in the cellar; I stir the cream every time I make additions; I churn once a week at this season of the year, using the Blanchard churn. I fix the cream at 62 degrees when I churn; the butter is usually about one hour coming; I draw off the buttermilk and rinse the butter thoroughly with cold water, work it with the churn, and salt with Ashton salt, one ounce of salt to a pound of butter; salt in the churn, stand twelve hours, work with the hands, stand twelve hours more, then put into the mould, when it is ready for the market. The milk is kept in a cool, airy room in the house; the temperature of the room is as near 60 degrees as possible; when it goes higher, I give all the cool air that I can; when it goes lower, I warm up with a stove. The cows are kept on dry fodder at the barn, night and morning, and what they can graze the rest of the day.

STATEMENT OF MRS. STEPHEN MORSE.

The process of making the sixteen pounds of butter contained in the box which I present, and made within the past week, was as follows:

After milking, the milk was strained into tin pans, in a dairy room situated on the north side of the house, well ventilated, and kept at a temperature as near 60 degrees as possible, and allowed to stand in the pans twenty-four hours; the cream is then separated from the milk and put into tin pails, and placed in the cellar, stirred gently twice a day, and a little salt put in the cream three times during the week. The temperature 60 degrees when put into the churn; butter worked over by the hands when taken from the churn, allowed to stand twelve hours and then worked again and lumped; one ounce of salt to the pound used; made from a dairy of eight cows, fed upon ordinary fall feed.

Cream, Churning and Butter.

I will give my plan for saving cream and churning. I have two three-gallon jars in which I save my cream. In addition to the cream I put in, I save a quart of stripings from each cow every milking. When the jar is two-thirds full of stripings and cream, if it is not yet sour, I put in a tea-cup full of buttermilk and set it where it will get sour by the time the jar is full. Its tendency to sour is increased by having a paddle all the time in the jar, and frequently by stirring cream and stripings. I now scald the churn; then cool it. In cold weather I set my jar of cream in a vessel containing a half gallon of boiling water, stirring the cream until the water is only a little more than milk warm. If the cream is already somewhat warm, of course it must not remain in the water so long. I now turn it into the churn, churning it gently and regularly, and have nice yellow butter in from five to ten minutes. If the cream is a little too warm the butter will be white when first taken out of the milk, but when worked down, after being salted and cooled, it will be yellow. Following the above plan, I never fail of success.—*Cincinnati Gazette*.

Manure for Corn.

No crop except tobacco requires so large a supply of potash and the phosphates as corn. The following analysis of the ashes of the grain and of the stalk has been furnished by Prof. Johnston. The proportions are 1000 pounds of each:

ANALYSIS OF INDIAN CORN.

	Corn Stalks.	Grain of Corn.
Potash....	96	{ 325
Soda.....	286	14
Lime.....	83	102
Magnesia.....	66	03
Oxide of Lime.....	08	449
Phosphoric Acid....	171	28
Sulphuric Acid.....	07	02
Chlorine.....	15	14
Silica.....	270	997
Total,	1012	

It will then be seen that potash, soda and silica, are required in a corn soil in far larger proportions than any other inorganic element, and that next to these are the phosphates. If these are deficient the crop will be lessened in proportion. It follows from these analyses, that the fertilizers most required for corn are: 1st, unleached wood ashes, or their equivalent in the potash and soda of commerce; and, 2d, phosphate of lime to be drawn either from fine ground bones, or from the super-phosphates which are to be had of the manufacturers of fertilizers. The silica, of which so large an amount is required in the coating of corn stalks, is drawn from the soil, being rendered soluble by the chemical action of soda upon the sand, and by other agents within the soil itself, or derived from the atmosphere.

Be always kind and true, spurn every sort of affection or disguise. Have the courage to confess your ignorance and awkwardness. Confide your faults and follies to but few.

BALTIMORE MARKETS---May 26.

Prepared for the "Maryland Farmer" by GILLMORE & SON, Produce Commission Merchants,
194 W. Pratt st.

[Unless when otherwise specified the prices are wholesale.]

ASHES.—Fair demand; \$6.75@7.25

BEESWAX.—Prices firm, with good export demand;
30@32 cts.

BROOM CORN.—Nominal; Red, 4@5 cts.; Green, 6@7 cts.

BUTTER.—Receipts excessively large, and prices very weak. Good to choice 18 to 20 cts. per lb.

COTTON.—Market animated, with active sales.

Upland. Gulf.

Ordinary.....	12½ cents.	13½ cents.
Good ordinary.....	14½	14½
Low middling.....	15½	15½
Middling.....	16½	16½

COFFEE.—Very active market, prices ranging for fair to prime 14½ to 16 cts.

EGGS.—Market very active, and prices advancing. Fresh in carriers 18@19 cts.; do. in barrels 16@17 cts.

FERTILIZERS.—No change to note. We quote:

Peruvian Guano—gold.....	\$68	Y ton of 2000 lbs.
Orchilla and Rodonda.....	30	Y ton "
Turner's Excelsior.....	60	Y ton "
Turner's Ammo. S. Phos.....	50	Y ton "
E. F. Coe's Ammo. S. Phos.....	55	Y ton "
Ober's Phospho-Peruvian Guano	65	Y ton "
Ober's Super-Phosphate of Lime..	55	Y ton "
Soluble Pacific Guano.....	60	Y ton "
Patapsco Guano.....	60	Y ton "
Flour of Bone.....	60	Y ton "
Andrew Coe's Super-phosphate..	52	Y ton "
Baugh's Raw Bone S. Phos.....	50	Y ton "
Excelenza Cotton Fertilizer.....	56	Y ton "
Excelenza Soluble Phosphate..	56	Y ton "
Excelenza Tobacco Fertilizer..	60	Y ton "
Meat and Bone Guano.....	40	Y ton "
Magnum Bonum Soluble Phos..	52	Y ton "
Ruth's "Challenge" Sol. Phos..	60	Y ton "
Zell's Raw Bone Phosphate.....	56	Y ton "
Rhodes' do.....	50	Y ton "
Mapes' do.....	60	Y ton "
Bone Dust.....	45	Y ton "
Hornor's Bone Dust.....	45	Y ton "
Dissolved Bones.....	60	Y ton "
Baynes' Fertilizer.....	40	Y ton "
"A A" Mexican Guano.....	30	Y ton "
"A" do. do.....	30	Y ton "
Moro Phillips' Super-Phosphate..	56	Y ton "
Whann's Raw Bone Super Phos..	56	Y ton "
Md. Fertilizing & Manufacturing Co's Ammoniated Super-Phos- phate	{ .55	Y ton
Fine Ground Bone Phosphates	{ .30	Y ton
Plaster.....	\$2.25	Y bbl.

FLOUR.—Market dull.

City Mills Super..... 5.62 @ 6.00

" Extra..... 6.75 @ 7.00

" Family..... \$11.00

Howard Street Super..... 5.75 @ 6.25

" Extra..... 6.50 @ 7.00

" Family..... 7.50 @ 8.00

Western Super..... 5.75 @ 6.25

" Extra..... 6.25 @ 6.50

" Family..... 7.25 @ 8.50

GRAIN.—Wheat, dull and heavy; prices ranging from

\$1.60 to \$1.90 per bus. Corn, firm and active; White, 75@

78 cts.; Yellow, 74@76 cts. Oats, dull at 62@66 cts.

MILL FEED.—Market firm; Brownstuds 26@27 cts.;

Middlings 35@37 cts.; heavy 45@50 cts. per bus.

MOLASSES.—Prices firm; New Orleans, 65 to 70 cts.;

Porto Rico, 45 to 48 cts.; Demerara, 35@38 cts.

PROVISIONS.—More animation in the market; Hams,

14@17 cts.; Sides 9½@10 cts.; Shoulders, 7½@8 cts.; Lard 11@11½ cts.

POULTRY.—Receipts large and on the increase. Old

fowl, \$5 to \$5.50 per doz.; Chickens at \$2.75 to \$4.50 per doz.

RICE.—Carolina 9 to 10 cts.

SALT.—Ground Alum, \$1.30 to \$1.40; Fine \$1.85 to \$2.00

per sack; Turk's Island, 50@55 cts. per bushel.

SUGAR.—Fine grocery grades, N. O., 10@10½ cts.; Porto

Rico, 10@10½ cts.; Demerara, 11@12 cts.

WHISKEY.—95 to 96 cts.

SOME DEFINITIONS.

There are a few terms in use among breeders which have need of explanation to those just commencing to handle Live-Stock; particularly cattle and horses. Some of them are :

Thoroughbred—of horses and cattle—An animal whose entire blood is traceable to ancestors of acknowledged purity of blood, whose pedigrees have been recorded in the British or American Turf Registers, Stud Books, or Herd Books. The term is applied with equal propriety and the same meaning to horses and cattle. It is sometimes stated that if a fixed number of crosses (generally seven) of thoroughbred stock, can be traced in the direct lineage of an animal, this constitutes the one in question a thoroughbred. We do not subscribe to that opinion, but maintain that the evidence of pure breeding thus furnished is only *prima facie*, and that any admixture of cold blood *proven to exist* at any point in the chain, vivifies the stock, and it cannot be thoroughbred. In case of a contest at a fair or elsewhere, the proof of five crosses of thoroughbreds, in the immediate ancestry, should, perhaps, entitle an animal to show as thoroughbred, unless the challenger shows an infusion of cold blood back of those crosses.

Cold Blood—Not used of cattle—of horses means any strain not thoroughbred.

Full Blood—Not used of horses—of cattle means anything less than thoroughbred, and not below fifteen-sixteenths of a thoroughbred blood.

Cross—Of horses means the produce of any two or more different strains or families. Of cattle, means the produce of any two thoroughbred races—as pure Short-horns and Devons.

Grade—Of cattle only—Means the produce of a thoroughbred and some other not thoroughbred.—*National Live Stock Journal*.

DESTRUCTION OF MOTHS.—It is said that moths in furniture may be destroyed by placing the furniture in a warm, close room, and frequently sprinkling the under side of the seats, etc., with carbolic acid. The warmth of the room hatches the eggs, and the larvae are immediately killed by the fumes of the acid.

Nervous and General Debility, Heart Disease, and those chronic, lingering diseases which are peculiar to females, are cured by that wonderful and valuable remedy—Dr. Pierce's Alt. Ext. or Golden Medical Discovery. In Bronchial, Throat and Lung diseases, it has no equal. \$1.000 reward is offered by the proprietor for a medicine that will equal it in the cure of all those diseases for which it is recommended. Sold by Druggists.

Dr. Sage's Catarrh Remedy is no humbug.

FRUIT PIE.—One cup of any kind of fruit, stewed, preserved, green or spiced. One cup of bread crumbs, a piece of butter half the size of an egg, half a teacup of vinegar; sweeten and spice to the taste. Have a top and bottom crust.

The Persicator

OR

CONCENTRATED ASHES.

The great need of agriculture is POT-ASH, the use of Phosphates and Guano have only made this need more urgent. It is especially adapted for the

Peach Culture,

from which it takes its name. It is cheap, reliable and has proved successful. Is prepared under direction of that eminent practical agricultural chemist, Dr. David Stewart, and is excellent for Corn, Tobacco and Grain crops generally.

Pamphlets with evidence of its value, as proved last season, will be furnished on application.

Manufactured by HIGGINS, REYBOLD & CO., Delaware City, and for sale at \$43 per 2000 lbs., in Barrels, by their agents,

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Iron Ox Hurdle Fence, Iron Sheep Hurdle Fence, Wire Webbing for Sheep and Poultry Yards, Iron Farm Gates, Guards for Stable Divisions, Store Fronts, Factories, &c., Tree Guards, ORNAMENTAL WIRE WORK for Porches, Green Houses, &c.; WIRE RAILING for Cottage, Garden and Cemetery enclosures: Mosquito Netting and every variety of WIRE WORK. Every information furnished by manufacturers.

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Glass Cutter.

The EXCELSIOR GLASS CUTTER. cuts Glass equal to a Diamond. Price, single one, sent by mail on receipt of price, \$1.50, or per dozen, sent by express, \$12.

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Book and Job Printing of every description neatly executed.

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POUDRETTE—\$25 per Ton.

Consisting of— 667 lbs. Bone,
1333 " Nitrogenous matter,
in 2000 lbs.

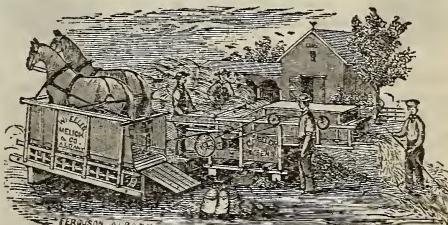
"FERTILIZER"—\$40 per Ton.

Consisting of— 667 lbs. Bone,
666 " Meal,
667 " Poudrette,
in 2000 lbs.

These fertilizing compounds are made by the Baltimore City Fertilizing Company. A bonus of eighteen thousand dollars per annum is paid to the Company by the corporation of Baltimore city for receiving the dead animals, excrements, &c. Ten tons of excrement yield about one ton of the nitrogenous matter used in the manufacture of POUDRETTE. From the high character for integrity of the officers of this Company—from the well known character of the ingredients warranted by them to be used in these compounds, and from my own personal experience as a farmer in comparing them with other fertilizers upon crops of grain, tobacco, fruits and vegetables, I feel fully warranted in recommending these compounds to agriculturists, believing that there is no fertilizer manufactured which in comparison of cost with results will pay the farmer as well as the articles I hereby offer for sale.

N. E. BERRY,

Agent for the Company,
No. 10 Bowly's Wharf, Balto.



New York State Agricultural Works, WHEELER, MELICK & CO.,

PROPRIETORS, PATENTEES AND MANUFACTURERS OF
**RAILWAY CHAIN AND LEVER
HORSE POWERS,**

Combined Threshers and Winnowers, Overshot-Threshers, Clover-Hullers, Feed-Cutters, Saw-Mills, Horse-rakes, Horse-Fitchforks, Shingle-Machines, &c. Albany, N. Y.
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WOOD PUMPS,

Measuring 213,566 feet in length, or sufficient in the aggregate for

A WELL OVER 40 MILES DEEP,

Simple in Construction—Easy in Operation—Giving no Taste to the Water—Durable—Reliable and Cheap.

These Pumps are their own recommendation.

For sale by Dealers in Hardware and Agricultural Implements, Plumbers, Pump Makers, &c., throughout the country. Circulars, &c., furnished upon application by mail or otherwise.

Single Pumps forwarded to parties in towns where I have no agents upon receipt of the regular retail price.

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OFFICE AND WAREROOM,
624 & 626 Filbert St., Philadelphia.

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COMPLETE MANURE,
MANUFACTURED BY
HENRY BOWER, Chemist,
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MADE FROM

Super-Phosphate of Lime, Ammonia and Potash.
WARRANTED FREE FROM ADULTERATION.

This manure contains all the elements to produce large crops of all kinds, and is highly recommended by all who used it, also by distinguished chemists who have, by analysis, tested its qualities.

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APPLE TREES—5 to $\frac{1}{2}$ feet, \$15 per 100, \$125 per 1000, most of the leading varieties of Southern winter apples are embraced in our collections.

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PEACH TREES—(Our Specialty,) a full assortment of the best market varieties.

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Patented April 25th, 1871,

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Rural Architect, of Baltimore, Md.

OFFICE,

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As my Stall enables horse owners to dispense with all bedding, and effects a large saving of both hay and grain, livery men and others have decided that they cannot afford to do without it. John Meeth, Esq., has just erected a fine Hack and Livery Stable, corner of Republican and Saratoga Sts., Baltimore, all the Stalls of which, 30 in number, are supplied with my Patent System of Drainage, which Mr. Meeth says, not only gives him the most cleanly and comfortable Stable that he has ever seen, but that the saving arising from the improved drainage, will pay the cost of the Patent in a few months; and that he is satisfied that the floors of the Stalls will last more than twice as long as the same materials would, if constructed on the old system.

Were it necessary, I might name numerous other gentlemen, in various parts of the country, who are using my Patent Horse Stall with the fullest satisfaction.

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ARCHITECT, Baltimore, Md.

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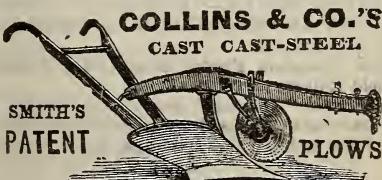
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The following are among my specialties:

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Polished, Hardened Steel and Cast Iron. Farquhar's Cast Steel Model Plow, one and two horse, warranted in any soil, and under all circumstances, *second to none*.—American Clipper, Full Steel, one, two and three horse. Atwood and Ohio Cast Plows, two and three horse. Sub-soil Plows, Steel soled, two and three horse. Hillside or Swivel Plows, &c., &c.

Shovel Plows, Cultivators, Sulkie Plows

Made of the best White Oak, or Refined Iron Beams, with hardened Steel Shovels, Plain or Reversible.

KEYSTONE CORN PLANTER, with PHOSPHATE ATTACHMENT, works perfectly with any size Corn and any pulverized Fertilizer.

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AGRICULTURAL STEELS.

Cultivator Teeth, hardened steel, Shovel Plow Blades, Cotton Scrapers, Improved Dickson Cotton Sweeps, &c., all of best Steel, made expressly for my use.

Pelton Triple Geared Horse Powers.

This celebrated Horse Power is fast taking precedence wherever introduced; it is more economical, durable and lighter of draft than any other. I make all sizes from two to ten horse.

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Of all sizes, for both Gear and Belt.

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From two to ten Horse Power; simple, strong and durable. Turbine Water Wheels, Mill Gearing, Plow Irons and Castings, &c.

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Having improved Blanchard machinery for the manufacture of Plow Handles upon an extensive scale, I can supply first quality Handles, side bent to order for any pattern of plow.

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REAPING AND MOWING

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PRICES.

Senior Combined with Dropper	\$190 00
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Senior Mower.....	135 00
Junior "	115 00



Having been selling the Excelsior for the past four years, we are so thoroughly convinced of its excellence, having found it to give more universal satisfaction than any machine which we have ever sold, which includes nearly all the leading machines in the market, that we have no hesitation in recommending it as the VERY BEST COMBINED MACHINE IN THE COUNTRY.

We have shipped a large number of them South, into Georgia and the Carolinas, where they went into the hands of persons entirely unused to this class of machinery, and HAVE NEVER YET HAD AN INSTANCE where they failed to get them together properly and work them to their entire satisfaction. This can perhaps be appreciated, not only by dealers who have sent machines out and after considerable vexation had them returned at a considerable loss, but also by farmers who have at some time bought a complicated machine, and after great trouble in getting it together had perhaps some of the many pieces of machinery break just at the time when the machine was most needed.

There are two sizes of these machines, and we invite those in want of a good Reaper and Mower to call and examine "The Excelsior" before purchasing elsewhere.

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145 and 147 West Pratt Street,

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PURE GROUND BONES.

The richest preparation of this article offered, containing 8 per cent. of Ammonia, and 40 per cent. of Bone Phosphate of Lime. The purity of this Bone can be seen by the small amount of insoluble matter—less than one-third of one per cent. FOR SALE IN BAGS, in lots to suit. Also,

THE CELEBRATED AMMONIACAL MATTER,

Containing some 13 per cent. of Ammonia, in the form of Nitrogen—superior to Peruvian Guano—and so pronounced by Professors Genth, Liebig, Piggott, Tonry, Wilson and Dr. Pendleton, of Sparta, Ga.

ALSO,

PENDELTON'S GUANO COMPOUND AND SOLUBLE SEA ISLAND GUANO, IN STORE AND FOR SALE.

Dr. T. B. WEST, of Columbia County, Ga., says: Of the seventeen different fertilizers used, Pendleton's Compound is largely ahead in value. Of the eighty-four planters in Hancock using this Guano, all are pleased and endorse it.

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Extract from the Petersburg Courier of Feb. 1, 1871.

SOLUBLE SEA ISLAND GUANO.—We desire in a short time to give a full account of this valuable article, as it is recommended to us by some of the best farmers in our section as being the "best Guano now used for the production of Tobacco and Vegetables."

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32 SOUTH STREET,

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THE MARYLYAND FARMER.

THOMAS NORRIS & SON,

141 Pratt Street, near Light, Baltimore, Md.

Would remind their old friends and customers, all farmers and dealers in

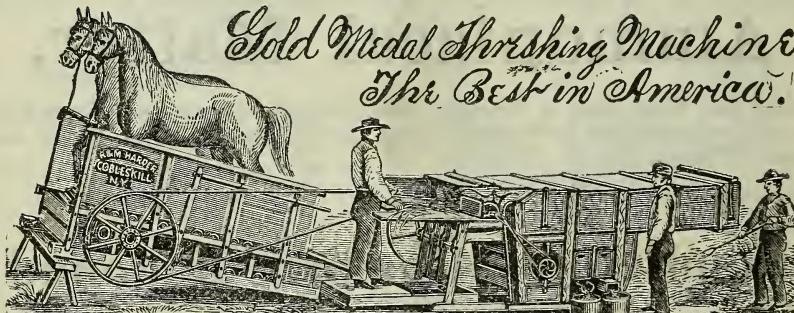
AGRICULTURAL IMPLEMENTS AND MACHINERY, FIELD AND GARDEN SEEEDS,

That they are prepared to furnish first-class HORSE POWERS, THRESHERS AND CLEANERS, PLAIN THRESHERS, REAPING AND MOWING MACHINES. A very superior Hand Lawn Mower for \$25. All kinds of Harvesting Tools. Call special attention to their NOVELTY HORSE RAKE, which has given perfect satisfaction for three years past. The TIFFIN REVOLVING HORSE RAKE, WHEAT FANS, GRAIN CRADLES, MOWING SCYTHES AND SNEATHS, HAND RAKES, STRAW AND HAY FORKS, PLOWS, CULTIVATORS, HARROWS, &c., FRESH AND GENUINE FIELD AND GARDEN SEEDS, etc. We have no taste for saying extravagant things about our goods; try us, and we will give you something as good as you will find elsewhere.

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Harder's Premium Railway Horse Power and Thresher and Cleaner awarded

THE TWO GRAND GOLD MEDALS

At the Great National Trial, at Auburn, N. Y.,

For "Slow and easy movement of horses, 15 rods less than 1½ miles per hour; Mechanical Construction of the very best kind; thorough and conscientious workmanship and material in every place; nothing slighted; excellent work, &c." as shown by official Report of Judges. Threshers, Separators, Fanning Mills, Wood Saws, Seed Sowers and Planters, all of the best in Market. Catalogue with price, full information, and Judges Report of Auburn Trial sent free.

Address. MINARD HARDER. Cobleskill, Schoharie Co., N. Y.

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E. W. EICHLEBERGER, Esq., of Heathsville, Va., writes us: "The Post Hole Digger you sold me is the greatest and best thing on top the ground for the purpose." Send for a descriptive circular. No one who has post holes to dig can afford to do without it. Price \$5.

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We can safely recommend this Churn. Send for a descriptive circular.

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JOS. SMITH, Esq., of Baltimore county, who hybridized this Corn, certifies that his tenant, Mr. Shipley, raised last year 19½ barrels per acre in Baltimore county. Price \$2.50 per bushel.

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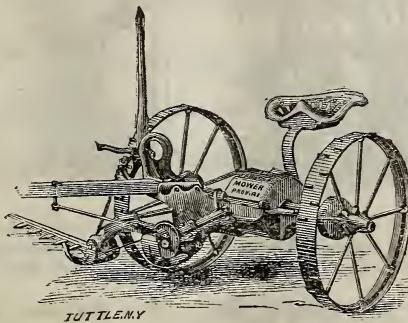
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\$100.

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SPRAGUE MOWER.



PERFECTION!

The cheapest Machine in the market, because the lowest in price in proportion to its value.

Its chief points of excellence are—

Strength, Simplicity, Lightness of Draught,

Ease of Management, Durability.

It is the least liable to get out of order of any Machine in the market.

Call and examine THE SPRAGUE before purchasing any other Machine, or you will always regret it. If you cannot call, send for a circular.

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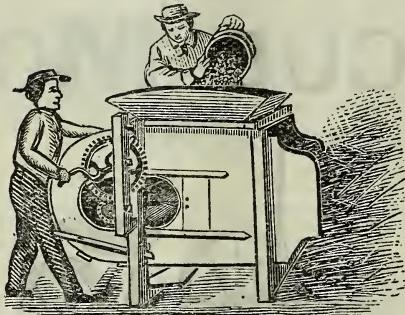
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Have been proven by a great many trials, in which they have beaten every Fan of any pretensions sold in the Southern States, to be undoubtedly the best Wheat Fan ever invented.

The Committees of one hundred and forty-five Fairs have decided that it was the best, and have given it the premium.

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It is the only Fan that will take garlic out of wheat.

It is the only Fan that will take oats out of wheat with any degree of certainty.

It will separate corn, gravel, rat filth, &c., from wheat.

It will take out more cockle than any other Fan.

It is the cheapest Fan in the market when you take into consideration the substantial manner in which it is made, and the number of sieves and screens to each Fan, and other valuable arrangements for separating oats, garlic, cheat, gravel, &c., from the wheat.

Each Fan is made under the superintendence of the inventor, who has for the past thirty years devoted his entire attention to the manufacture of Fans.

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Excelsior Wheat Fans.

These are as good as any Fan in the market excepting the Montgomery.

PRICE \$30.

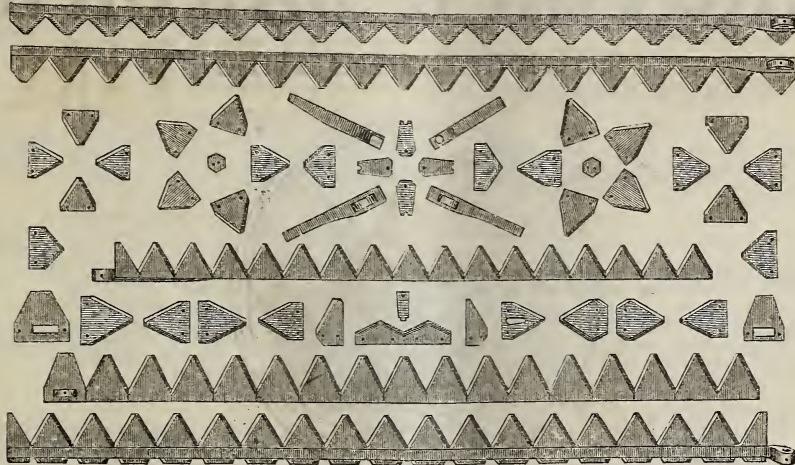
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Mowing and Reaping Machine Knife Sections.



We are the agents for THE SIMMONDS MANUFACTURING CO., manufacturers of Reaper and Mower Knife Sections of every description, and have a large stock of Sections for every Machine sold in the Middle and Southern States.

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TO CORN GROWERS !

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J. J. TURNER & CO.'S
AMMONIATED

Bone Super-Phosphate.

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<i>ANALYSIS</i> —Ammonia.....	2.83
<i>Soluble Phosphate of Lime</i>	29.51
<i>Bone Phosphate of Lime</i>	10.67

Composed of the most concentrated materials, it is richer in Ammonia and Soluble Phosphates than any other fertilizer sold, except our "EXCELSIOR," and is made with same care and supervision. Uniform quality guaranteed. Fine and dry, in excellent order for drilling. Packed in bags and barrels. PRICE \$50 PER TON.

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HIGHEST PREMIUM



ELASTIC STITCH FAMILY SEWING MACHINES.

POINTS OF EXCELLENCE.

Beauty and Elasticity of Stitch.

Perfection and Simplicity of Machinery.

Using both threads directly from the spools.

No fastening of seams by hand, and no waste of thread.

Wide range of application without change of adjustment.

The seam retains its beauty and firmness after washing and ironing.

Besides doing all kinds of work done by other Sewing Machines, these Machines execute the most beautiful and permanent Embroidery and ornamental work.

The Highest Premiums at all the Fairs and Exhibitions of the United States and Europe have been awarded the Grover & Baker Machines, and the work done by them, wherever exhibited in comparison.

BB The very highest prize, THE CROSS OF THE LEGION OF HONOR, was conferred on the representative of the Grover & Baker Sewing Machines, at the Exposition Universelle, Paris, 1867, thus attesting their great superiority over all other Sewing Machines.

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Extra

Terms.

AGRICULTURE AND LABOR.

In pursuance of the "Address to the People of Maryland," issued by order of the Convention held in the City of Baltimore on the 13th of December last, the Convention will meet again in the City of Baltimore on **THURSDAY, June 1st, 10 o'clock A. M.**, at Raine's Hall, corner of Baltimore Street and Post Office Avenue, *for the purpose of receiving reports and perfecting organization.* The Delegates from the different Counties are earnestly requested to be punctual in attendance.

ODEN BOWIE,
President.

FOR SALE.

COTSWOLD SHEEP AND LAMBS, three months old, \$15 each.

Southdown Sheep.

Pure Bred Chester White Pigs, as good as the best, \$10 each.

Aldeney, Durham, Devon and Ayrshire Calves, best breed of Dogs; Maltese Cats; American Deer; Peafowls in full plumage; Rouen, Aylesbury and Muscovy Ducks; Bronze Turkeys and Geese; Blue Turkeys: White, Blue and Speckled Guinea Fowls; Madagascar and Angora Rabbits; Fancy Pigeons, Guinea Pigs, and all Fancy Fowls. Also, EGGS for sale.

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This book is designed expressly for Ship Builders, Lumber Dealers, and Mechanics. It gives correct measurement for all kinds of Logs, Lumber, Boards, Plank, Scantlin, Wood, etc., and has become the standard book for measuring lumber throughout the United States. Every Farmer, Lumber Dealer and Mechanic should have a copy. Ask your bookseller for it, or send THIRTY CENTS to me, and I will forward you a copy, post paid. Address GEO. W. FISHER, No. 6 Exchange Street, Rochester, New York.

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S. HARRIS & CO.,
je-tf 186 Main St., Louisville, Ky.

Premium Chester White Pigs for Sale.

Pure Breed Chester Pigs, 7 weeks old, \$25.00 per pair. Boxed and ready for shipment, address,
JAMES F. GOULD, Gillman's Point,
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We have a limited supply of

St. LOUIS BONE FLOUR,

The particles of which are about the size of Timothy seed. We recommend this as something very superior. We will send a sample, by mail, to any one desirous of seeing it, and think an examination will convince any one of its superiority over anything in the market.

Price \$48 per ton of 2000 pounds.

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LANDSCAPE GARDENER,
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Gratefully acknowledges the liberal patronage given him in the various branches of his profession, for the past twenty years, a continuance of which he respectfully solicits.

It is his purpose to continue to make Baltimore his headquarters, but he will promptly respond to calls from all parts of the country.

He will visit and prospect places to be improved, and will furnish plans of the grounds, on which every feature of improvement and decoration will be located to a scale, and specifications will be furnished, which will make the plans intelligible to the inexperienced in the art of landscaping.

He will furnish plans and specifications for Farm Barns, and all other Farm Buildings, Carriage Houses and Stables, for both city and country, Gate Lodges, with his Magic Gate arrangement, Dairies, Ice Houses, with Dairies and Refrigerators attached, Summer Houses, Graperies, both heated and cold, Bridges, Bath Houses of ever description, &c.

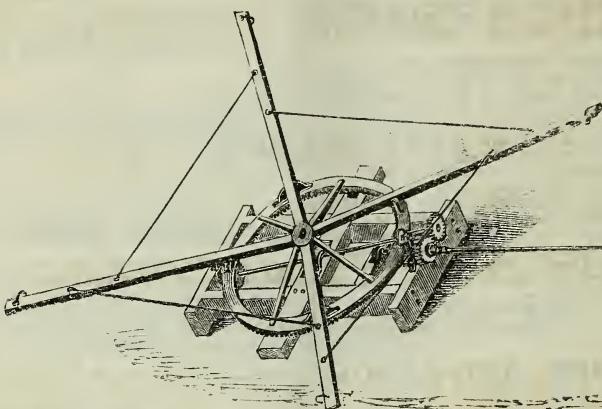
He will give counsel in every branch of Agriculture, in which he has had a long and practical experience having been for eight years the proprietor and principal of an Agricultural School and Experimental Farm.

He would invite special attention to his plans of Farm Buildings, for which he received the highest prize ever awarded in this country; also, to his original modes of constructing underdrains and sewers, and of irrigation. He will furnish plans for heating buildings of any form or dimensions, and will ventilate any cellar, vault or apartment, modifying the ventilation to all circumstances, conditions and purposes, in all of which he guarantees satisfaction. References given if desired. Address

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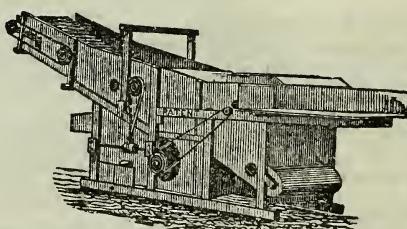
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Whitman's Double Geared Horse Power, (the most substantial power made),	\$175 00
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" 24 Inch Premium Iron Cylinder Thresher,	80 00
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Straw Carrier for either size Thresher,	25 00

WESTINGHOUSE THRESHER & CLEANER, IN BALTIMORE.



No. 1, 36 Inch Cylinder, for 10 Horse Power,	\$300 00
2, 30 " " 8 "	285 00
3, 30 " light 4 "	275 00

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34 Inch Cylinder, Weight 1,370 pounds.	\$275 00
30 " " 1,100 "	250 00
26 " " 1,000 "	240 00

For sale by

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2,000 BARRELS

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5½ feet Self-Raking Reaper.....	\$150 00
6 " " " "	160 00
5½ " " " " with Mowing attachment.....	190 00
6 " " " " " "	200 00
4 " Joint Bar Mower.....	110 00
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TERMS.—A deduction of \$5 will be made on each Machine if cash is paid on delivery. Purchasers may be accommodated with time by giving satisfactory paper, with interest, payable at bank.

A supply of all kinds AGRICULTURAL IMPLEMENTS AND MACHINERY, FIELD AND GARDEN SEEDS constantly on hand.

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The subscriber has just erected at his farm, near the city, the most improved machinery for making

BONE DUST,

And is now ready to fill orders for any quantity, which will be delivered at the shortest notice. The Bone Dust will be finer than any heretofore made by him, (no chemical process resorted to,) enabling the farmer or planter to sow it with the Drill.

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SOLD BY ALL DRUGGISTS

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